



### **NAVAL AIR STATION** FORT WORTH JRB **CARSWELL FIELD TEXAS**

### **ADMINISTRATIVE RECORD COVER SHEET**

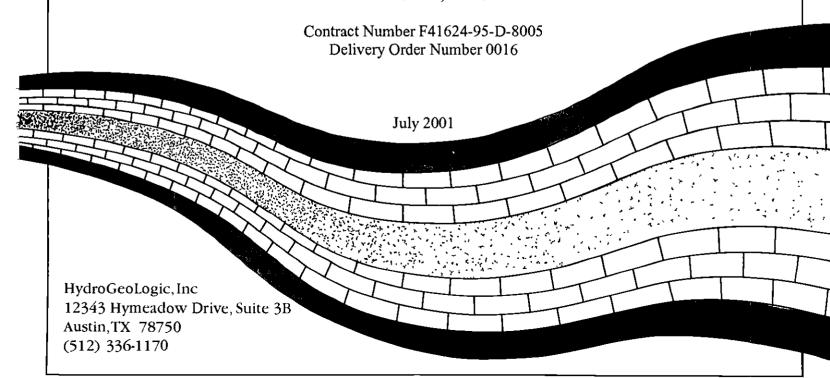


## FINAL AREA OF CONCERN 1 2000 ANNUAL GROUNDWATER REPORT LPST ID No. 104524 NAS FORT WORTH JRB, TEXAS



#### Prepared for

U.S. Air Force Center for Environmental Excellence Brooks AFB, Texas





July 10, 2001

Mr. Don Ficklen AFCEE/ERD 3207 North Road Brooks AFB, Texas 78235

Re: Final 2000 Area of Concern 1 (AOC 1) Annual Groundwater Monitoring Report

NAS Fort Worth JRB, Texas

LPST ID #104524

Facility ID No. 0009696

Dear Mr. Ficklen:

Please find the enclosed copy of the Final 2000 AOC 1 Annual Groundwater Monitoring Report. This document presents groundwater data acquired at AOC 1 during the 2000 Basewide Quarterly Groundwater Sampling Program. This document was prepared to fulfill the reporting requirements as specified in Title 30 of the Texas Administrative Code, Chapter 334 and in accordance with appropriate Texas Natural Resource Conservation Commission (TNRCC) guidance documents. AFCEE comments were incorporated into this Final Report, which was submitted to the TNRCC Petroleum Storage Tank (PST) Division.

If you have any questions, please do not hesitate to contact me at (512) 336-1170.

Sincerely,

Todd C. Harrah

Kent Duran for

Project Manager

**Enclosures** 

cc: Mr. Michael Dodyk, HQ AFCEE-ERD

Ms. Audrie Medina, UNITEC

## RESPONSES TO COMMENTS DRAFT AREA OF CONCERN 1 2000 ANNUAL GROUNDWATER REPORT LPST #104524 NAS FORT WORTH JRB, TEXAS

#### Responses to AFCEE's Comments

Comment 1 Page 1-1, 2<sup>nd</sup> paragraph, 4<sup>th</sup> sentence. Please replace "and the equipment left in place." with "with the equipment left in place."

Response The sentence was revised as recommended.

Comment 2 Page 1-1, 3<sup>rd</sup> paragraph, 3<sup>rd</sup> sentence. Please add "now known as Military Parkway" after "Rogner Drive".

Response The sentence was revised as recommended.

Comment 3 Page 2-1, 2<sup>nd</sup> paragraph. Please make a reference to a figure showing the three groundwater monitoring wells mentioned in the text.

Response The sentence was revised as recommended.

Comment 4 Page 2-3, please add an arrow to the figure showing generalized flow direction.

Response The figure was revised as recommended.

Comment 5 Page 4-2, 1<sup>st</sup> paragraph. The text mentions that MW-11 could not be sampled in October due to casing damage. Please state the likelihood that the well can be used for future sampling rounds. If MW-11 will be sampled, please update Appendix D to show that 10 wells, including MW-11, will be sampled.

Response Monitoring well MW-11 is permanently damaged by invading roots from an adjacent oak tree, and therefore is scheduled for abandonment later this year. Therefore, it will be permanently deleted from the AOC 1 well inventory.

Comment 6 Page 4-4, last paragraph, 1<sup>st</sup> sentence. Please change "Rogner Road" to "Military Parkway".

Response The sentence was revised as recommended.



## DEPARTMENT OF THE AIR FORCE HEADQUARTERS AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE BROOKS AIR FORCE BASE TEXAS

9 July, 2001

MEMORANDUM FOR DENNIS ROGERS (TNRCC)

FROM: Michael Dodyk, P.E.

HQ AFCEE/ERD P.O. BOX 27008

Ft Worth, TX 76127-0008

SUBJECT: UST Correspondence

Final 2000 Area of Concern 1

Annual Groundwater Monitoring Report

NAS Fort Worth JRB, Texas (Formerly Carswell AFB)

LPST ID #104524 Facility ID 0009696

Dear Mr. Rogers,

Two copies of the Final 2000 Area of Concern 1 (AOC 1) Annual Groundwater Monitoring Report for NAS Fort Worth JRB, Texas are enclosed for your review. This annual report is being provided to you for the purpose of presenting the 2000 groundwater sampling data at AOC 1.

The goal for this submittal is to present the most current groundwater conditions at the site. The annual report follows guidelines as presented in TNRCC Regulatory Guidance RG-43.

Recent groundwater monitoring at the site suggests that BTEX contaminants still exist downgradient from the Base Service No LNAPL was detected during either of the 2000 sampling events. At the January 2001 Meeting held at the TNRCC office in Austin, Texas, you requested two additional quarterly sampling events at nine AOC 1 wells, as well as the collection and analysis of West Fork Trinity River surface water samples. The first of two events was completed in April 2001. measuring 0.5 feet in thickness, was discovered and removed at off-site well WHGLTA038. This well has been monitored bi-weekly for LNAPL since it was first discovered in April. The second quarterly sampling event is scheduled for July 2001, and the results of both events will be presented as soon as the validated July data becomes available.

Supporting figures and attachments are included with the document. Should you have any questions regarding this report, please contact me at (817) 782-7167

Sincerely,

Michael R. Dodyk, P.E. Restoration Team Chief ERA Restoration Division

Enclosures

CC:

Mr. Don Ficklen HQ AFC3E/ERD 3207 North Road Brooks AFB, TX 78235

Ms. Audrie Medina UNITEC 2100 Bypass Rd., Building 580 Brooks AFB, TX 78235

## TEXAS NATURAL RESOURCE CONSERVATION COMMISSION PETROLEUM STORAGE TANK DIVISION CORRESPONDENCE IDENTIFICATION SHEET

Date:		<u>July 9, 2001</u> LPST ID No. <u>104524</u>						
Site Name:		AOC 1. Former Base Gas and Service Stations Facility ID No.: 0009696						
Site Address: NAS Fort Worth JRB, Texas 76127								
subn Sect	This checklist must accompany all correspondence submitted to the RPR Section and should be affixed to the front of your submittal as a cover page. Please check the appropriate box for the type of correspondence which you have submitted to the RPR Section. Check all boxes that apply if you are submitting more than one type of correspondence. If you cannot find an appropriate category, please complete the "other" section.							
	PROPOSALS							
	Initial Ab	atement (1)	□ Ta	nk Removal (2)			Excavation (3)	
	Waste Tre	eatment (4)	D Si	te Assessment (5)		Ò	Aquifer Testing (6)	
	VES/Spar	rge Testing (7)	□ Qt	rly GW Monitoring	(8)		CAP Prep. (9)	
	GW Extra	ac./Treatment (10)	□ Sc	al Vapor Extrac. (11	)		Operation & Main. (12)	
	Site Close	ure (13)	□ P1	an A Risk Ass. (14)			Plan B Risk Ass. (15)	
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D	Other pro	posal						
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a	Assessmen	ssment Report Form (TNRCC-0562)   LPST Case Questionnaire						
		et Recovery Report Form (TNRCC-0016)   Release Report Form (TNRCC-0621)						
	Site Closur	te Closure Request Form (TNRCC-0028)  Monitoring Event Summary and Status Report (TNRCC-0013)						
	Final Site (	Site Closure Report Form (TNRCC-0038)    Priority 4 LPST Case Closure Request Form (TNRCC-0461)						
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	MISCELLANEOUS							
	Off-site ac	cess assistance				Deadline	Extension Request	
	Tank tighti	ness test results				Request f	or State-Lead	
	Request fo	r LPST Waste Code	;			Class V R	Leinjection Request	
	Notice to C	Owner/Operator for	CAS Servi	ces		Petroleun	n-Substance Waste Manifest	
	Notice of (	Continuation of Gro	undwater N	<b>Ionitoring</b>		_	und Storage Tank Registration Form	
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	Other (any	thing that does not t	fit into one	of the categories abo	ve) _			

<sup>\*</sup> The proposal for semi-annual monitoring and annual report (Proposal Activity 17) has been discontinued. For semi-annual monitoring, use Proposal Activity 16.

guidance and rules. I certify that I am av	ware that misrepresen	tation of any of the	andards/practices and adhered to TNRCC above claims is a violation of 30 TAC aforth in 30 TAC 334.453 and or 334.463
If a proposal is attached for preapproval,	has the proposed wor		ole, already been performed or in progress?
If yes, what work?	_		
HydroGeoLogie, Inc.		00700	6/27/2001
(Registered Corrective Action Specialist)	(RCAS Reg. No.)		(Expiration date)
(Signature) Lattum		(Date)	7/9/01
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512/336-1170			512/336-0178
(Telephone #)		(Fax #)	
Kent Duran	CAPM	<b>[01534</b>	4/10/2003
(Project Manager)	(CAPM Reg No)		(Expiration date)
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(Signature) Let Dun		(Date)	7/9/01
512/336-1170 (Telephone #)		(Fax #)	512/336-0178
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By signature below, I certify that docum	nents checked above a	re mcluded.	
Don Fickien		(0)	AFCEE/ERD
(Name of Responsible Party Contact)		(Company)	
(Signature) Don Fickley		(Date) 9J	uly 01 536-9026
210/536-5290 (Telephone #)		210-	536-9026

# FINAL AREA OF CONCERN 1 2000 ANNUAL GROUNDWATER REPORT LPST ID No. 104524 NAS FORT WORTH JRB, TEXAS

#### Prepared for

U.S. Air Force Center for Environmental Excellence Brooks AFB, Texas

> Contract Number F41624-95-D-8005 Delivery Order Number 0016

> > Prepared by

HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, Virginia 20170

July 2001

Standard Form 298 (Rev 2-89)

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4. TITLE AND SUBTITLE			4 FUNDING	NUMBERS
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HydroGeoLogic, Inc				
7 PERFORMANCE ORGANIZATION NAMES(S) AND ADD	RESS(S)		8 PERFORM	MANCE ORGANIZATION
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AFCEE/ERD Brooks AFB				
Texas 78235-5328				
11. SUPPLEMENTARY NOTES				
DISTRIBUTION/AVAILABILITY STATEMENT			12b DISTRI	BUTION CODE
Unlimited				
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13 ABSTRACT (Maximum 200 words)				
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#### **PREFACE**

This document presents the Draft Area of Concern 1 2000 Annual Groundwater Report at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB). The report is organized by sections consisting of the following: Introduction; Monitoring Activities; Quality Assurance/Quality Control Procedures; Nature and Extent of Contamination; Conclusions and Recommendations; and References.

HydroGeoLogic, Inc. (HydroGeoLogic) prepared this report under contract to the United States (U.S.) Air Force Center for Environmental Excellence (AFCEE), Contract Number F41624-95-D-8005, Delivery Order 0016, in support of the U.S. Air Force Installation Restoration (IRP) Program. The AFCEE Contracting Officer's Representative (COR) is Mr. Don Ficklen.

This report was prepared under the direction of Mr. Todd C. Harrah, HydroGeoLogic's Project Manager.

#### DISCLAIMER

This Draft Area of Concern (AOC) 1 2000 Annual Groundwater Report, NAS Fort Worth JRB, has been prepared for the U.S. Air Force (USAF) by HydroGeoLogic for the purpose of aiding in the implementation of a final remedial action plan under the Air Force Installation Restoration Program (IRP). The limited objectives of this report and the ongoing nature of the IRP, along with the evolving knowledge of site conditions and chemical effects on the environment and health, must be considered in the evaluation of this document since subsequent investigations may make this document premature or inaccurate. Acceptance of this document in performance of the contract under which it was prepared does not mean that the USAF adopts the conclusions, recommendations, or other views expressed herein, which are those of the contractor only and do not necessarily reflect the official position of the USAF.

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Table 4.3a

Table 4.3b

#### LIST OF ACRONYMS AND ABBREVIATIONS

AB ambient blank
AFB Air Force Base

AFCEE Air Force Center for Environmental Excellence

AOC Area of Concern

ASTM American Society for Testing and Materials

BTEX benzene, toluene, ethylbenzene, xylene

C degrees Celsius COC chain-of-custody

DO dissolved oxygen DRO diesel range organic

EB equipment blank
EC electrical conductance
EDD electronic data deliverable

EPA U.S. Environmental Protection Agency

ERPIMS Environmental Resources Program Information Management System

FHS Fuel Hydrant System
FID flame ionization detector

GC gas chromatography
GRO gasoline range organic

GSAP groundwater sampling and analysis plan

IDW Investigation Derived Waste IRP Installation Restoration Program

JRB Joint Reserve Base

LNAPL light non-aqueous phase liquid LPST Leaking Petroleum Storage Tank

mg/L milligrams per Liter

NAS Naval Air Station

NCP National Contingency Plan

PAHs Polynuclear aromatic hydrocarbons

17

**PCBs** polychlorinated biphenyls photoionization detector PID

parts per million ppm

practical quantitation limit **PQL PST** petroleum storage tank

QA/QC quality assurance/quality control quality assurance project plan **QAPP** 

Resource Conservation and Recovery Act RCRA

**RPD** relative percent difference

site investigation SI

Solid Waste Management Unit **SWMU** semivolatile organic compound **SVOC** 

trip blank TB

total dissolved solids TDS

Texas Natural Resource Conservation Commission **TNRCC** 

TOC total organic carbon

total petroleum hydrocarbons **TPH** Texas Water Commission **TWC** 

**UST** underground storage tank

VOC volatile organic compound This page was intentionally left blank.

# TAB

SECTION L.O

20

#### 1.0 INTRODUCTION

#### 1.1 PURPOSE AND SCOPE

The objective of this Area of Concern (AOC) 1 Former Base Service Station and Former Base Gas Station Annual Groundwater Report is to summarize the analytical data obtained during two semi-annual groundwater sampling and analysis events performed during calendar year 2000. Groundwater sampling events for AOC 1 were performed in conjunction with the 2000 Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB) basewide long-term groundwater sampling program. Figure 1.1 presents the location of AOC 1 on NAS Fort Worth JRB. Specifically, this report summarizes the results of semi-annual groundwater sampling events that were performed in April and October 2000.

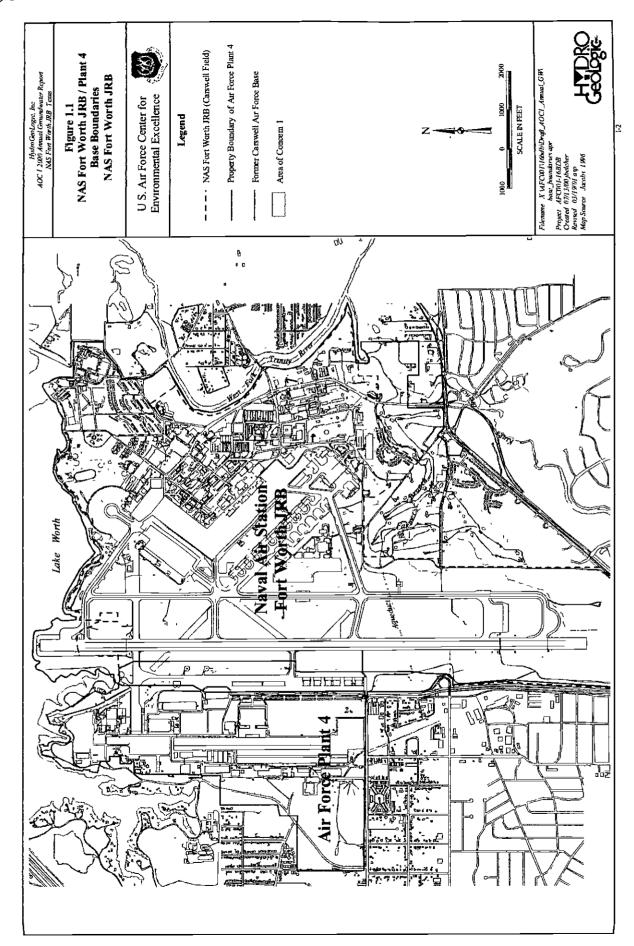
Groundwater monitoring at AOC 1 is being performed as part of the U.S. Air Force Installation Restoration Program (IRP) at NAS Fort Worth JRB, Texas. The Air Force Center for Environmental Excellence (AFCEE) is responsible for implementing this IRP. Investigations and corrective actions are being performed in accordance with the requirements of the Texas Natural Resource Conservation Commission (TNRCC), Petroleum Storage Tank (PST) Division. The work described herein was performed by HydroGeoLogic, Inc., as authorized by AFCEE under Contract No. F41624-95-D-8005, Delivery Order 0016.

#### 1.2 HISTORY OF PAST IRP WORK AT AOC 1

AOC 1 is comprised of two former refueling facilities; the Base Gas Station at building 1268 and the Base Service Station at building 1518. They were located on the east side of the base near the intersection of Military Parkway and Davison Drive (Figure 1.2).

The Base Gas Station, located west of the Base Service Station on Jennings Drive, began operation in the 1950s initially using three USTs for fuel storage. Sometime between 1960 and 1970, the facility converted the fuel storage capability to an AST system. After this conversion, the storage components at the station consisted of five 12,000-gallon ASTs (three leaded, one unleaded, and diesel fuel), and one 6,000-gallon AST (unleaded fuel) along with associated piping and spill prevention components. The facility remained active until 1989, when operations ceased with the equipment left in place. This equipment was eventually dismantled and removed in February 1994. It was during the removal of the tanks that soils were discovered to have been impacted with hydrocarbon contamination.

The Base Service Station was built and became operational in 1972. There were four 10,000gallon fiberglass USTs (all unleaded fuel) installed on the north side of the facility, with an additional 600-gallon waste oil tank placed in a separate excavation. In November 1984, gasoline was discovered in an adjacent drainage ditch that runs alongside Rogner Drive (now known at Military Parkway). A loss of 1,900 gallons of gasoline was recorded that month, with a subsequent leaking fuel line to one pump repaired soon afterwards (IT, 1996). The Base Service Station was added to the IRP and an initial site investigation began in 1987.



III

Additional site investigations were performed in 1992 verified petroleum hydrocarbons had impacted both soil and groundwater downgradient from the facility. Also in 1992, three tanks tested positive for leakage, and facility was issued a corrective action letter by the TWC, along with LPST ID No. 104524. Based on the failed tank tightness tests, gasoline sales were terminated and the three tanks were removed from service and properly disposed in May 1993. (IT, 1996). More recent site investigations have verified petroleum hydrocarbons impacted both subsurface soils and groundwater within and downgradient of the facility.

The IRP is designed to identify, characterize, and remediate any contamination discovered at U.S. Air Force installations, consistent with the National Contingency Plan (NCP). The IRP effort at the former Carswell AFB, Texas was initiated in 1984 by the Air Force. When Carswell AFB closed in 1994 and the U.S. Navy assumed control of the installation, AFCEE retained environmental restoration responsibility of this site. The following IRP investigations have been performed at or in the vicinity of AOC 1, NAS Fort Worth JRB, Texas:

- A. T. Kearney, 1989, RCRA Facility Assessment Preliminary Review/Visual Site Inspection, Carswell Air Force Base, Texas.
- Radian, 1991, Final Remedial Investigation Report for the Flightline Area, Carswell Air Force Base, Texas, October 1991.
- Maxim Engineers, Inc. (Maxim), 1992, Limited Environmental Investigation and Assessment of petroleum Hydrocarbon Impacts, Monitor Well Installation, Carswell Air Force Base, Fort Worth Texas, September 1992.
- Target Environmental Services, Inc. (Target), 1993, Soil Gas Survey, Site ST-16, Base Service Station, Carswell Air For Base, Texas, March 1993.
- Metcalf & Eddy, 1994, Report of Aboveground Fuel Storage Tank Removal at Carswell Air Force Base, Texas, April 1994.
- U.S. Army Corps of Engineers (USACE), 1994, comprehensive Site Assessment Report for UST Facility ID No. 009696, LPST ID No. 104524, Owner ID No. 04532, June 1994.
- International Technology (IT) Corp. 1996. HQ Air Force Center for Environmental Excellence, Final Work Plans, Site Characteristics of the Base Gas Station, NAS Fort Worth JRB, Carswell Field, Texas, July 1996.
- Law Environmental, Inc. (LAW), 1996. Installation Restoration Program Quarterly Groundwater Monitoring, First Semiannual Report, Vol.1

#### 1.2 CURRENT SITE INVESTIGATION

Current activities at both the former Base Gas and Service Stations include the continued monitoring of ten groundwater monitoring wells installed at both sites. Previous IRP studies have provided background confirmation for further investigations to continue monitoring the dissolved phase plume that has migrated eastward toward and beyond the base boundary. Prior to submitting a Site Closure Request to the TNRCC PST Division for approval, it must be demonstrated to the satisfaction of the TNRCC/PST Division that (1) no measurable non-aqueous phase liquids (NAPL) remain in site wells, (2) the plume has stabilized with respect to migration, and (3) contaminant concentrations are decreasing.

#### 1.3 DESCRIPTION OF CURRENT STUDY

The following guidance documents support the evaluation of field and analytical findings at AOC 1.

- Texas Natural Resource Conservation Commission, Petroleum Storage Tank Division, 1996, RG-17: Action Levels for LPST Sites (TNRCC, 1996a).
- Texas Natural Resource Conservation Commission, 1995, RG-175: Guidance for Risk-Based Assessment at LPST Sites in Texas, Emphasizing Initial Investigations and Plan A Evaluation (TNRCC, 1995).
- Texas Natural Resource Conservation Commission, Leaking Storage Tank Program, 1994, RG-36: Risk-Based Corrective Action for Leaking Storage Tank Sites (TNRCC, 1994).
- Texas Natural Resource Conservation Commission Regulatory Guidance, Petroleum Storage Tank Division, 1996 (rev.), RG-43: Groundwater Monitoring and Reporting (TNRCC, 1996b).
- Texas Natural Resource Conservation Commission Interoffice Memorandum, February 10, 1997: Process for Closure Evaluation for Petroleum Hydrocarbon LPST Sites Exceeding Target Concentrations (TNRCC, 1997).

The TNRCC Risk-Based Corrective Action Program and the TNRCC Plan A Site Assessment Process are presented in Figures 1.3 and 1.4, respectively.

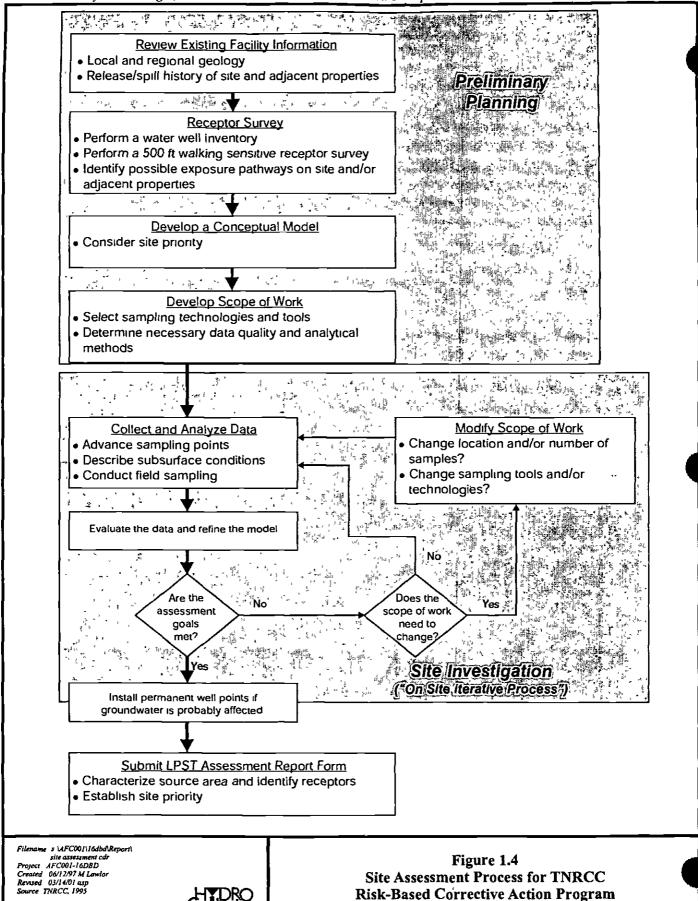
The objective of Year 2000 AOC 1 annual groundwater monitoring was to provide analytical data to evaluate plume stabilization, identify possible areas that may continue to be sources of fuel contamination, and to determine if contaminant concentrations are decreasing in order to fulfill the requirements for closure under the TNRCC's LPST Program.

The objectives of this project were to follow TNRCC recommendations by the completion of the following tasks:

25 HydroGeoLogic, Inc. — AOC 1 2000 Annual Groundwater Report—NAS Fort Worth JRB, Texas Release Incident Discovery Implement appropriate emergency abatement TNRCC issues Notice of Contamination Directive Letter Site Assessment (Figure 1.3) Identify potential receptors and prioritize case TNRCC appro Eveluata Undar Plan A—Early Exit Criteria (Meets soll and groundwater pathways) Figure 1 4 and 1 5 RP elects Plan B Evaluation and Report Concentrations Meet Early Exit Criteria Conduct supplemental investigation to collect data required for Plan B evaluation Plan B Corrective Action Plan Identify most cost-effective plan for achieving target clean-up goals Corrective Action Plan Implementation • Implement approved Corrective Action Plan Target clean up goals echieved? Quarterly Monitoring Program Conduct groundwater monitoring for one year in accordance with TNRCC guidelines to confirm compliance with target clean-up goals s correctly RP submits site closure request form to TNRCC Closure RP revises report approved by TNRCC and/or completes Yes Final site closure letter issued by TNRCC RP submits final site closure report to TNRCC Filename x \AFC001\16bdb\Draft AOC7\_SWMU68 2000 Annual GW\ turce action program edr Created 06/12/97 M Lawlor Revised 03/14/01 asp Source TNRCC 1995 Figure 1.3

1-7

TNRCC Risk-Based Corrective Action Program



1-8

- Confirm plume stabilization by monitoring concentrations of VOC indicator compounds in groundwater including, benzene, toluene, ethylbenzene, and xylenes (BTEX); and comparing to Plan A- Category II Target Groundwater Concentrations as defined in TNRCC RG-36 (TNRCC, 1994).
- Investigate downgradient surface water to determine the presence, or not, of dissolved phase hydrocarbon seepage into the West Fork Trinity River.
- Installation of three off-base monitoring wells per TNRCC recommendation to monitor off-base contaminant migration.

#### 1.4 REPORT ORGANIZATION

This AOC 1 annual groundwater report was designed to contain, at a minimum, all information stated in the TNRCC, PST Division Groundwater Monitoring and Reporting guidance (TNRCC, 1996b). In order to present this information, the remainder of the report is organized as follows:

- Section 2.0 presents monitoring activities, including water level measurements and field parameters; well purging and sample collection; laboratory and chemical analysis selection; laboratory and field QA/QC analysis; and Investigation Derived Waste (IDW) management.
- Section 3.0 presents a discussion on the quality assurance/quality control (QA/QC) program; including field and laboratory QC samples; sample tracking protocol; and the U.S. Environmental Protection Agency (EPA) approved analytical methods used to extract and analyze the samples.
- Section 4.0 presents the target concentrations; assessment of the nature and extent of groundwater contamination; and analytical findings of the 2000 AOC 1 groundwater monitoring program.
- Section 5.0 presents conclusions and recommendations.
- Section 6.0 provides references used in preparing this document.
- Appendix A Field sampling data sheets, field sampling data reports, and laboratory chains-of-custody (COC), boring logs, and well construction diagrams.
- Appendix B Copies of all Investigation Derived Waste (IDW) Records.
- Appendix C All AOC 1 monitoring well laboratory results and QC results.
- Appendix D Proposal for Additional Activities.
- Appendix E Signed laboratory summary reports.

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SECTION 2.0

#### 2.0 MONITORING ACTIVITIES

This section describes the procedures performed throughout both 2000 AOC 1 groundwater sampling events. All samples were collected in conjunction with basewide groundwater sampling events and were performed in accordance with the 2000 Basewide Groundwater Sampling and Analysis Plan (GSAP) (HydroGeoLogic 2000b), and the Basewide Quality Assurance Project Plan (QAPP) (HydroGeoLogic 2000c).

#### 2.1 MONITORING OBJECTIVTIES

The basewide groundwater sampling program was initiated for NAS Fort Worth JRB in April 1995 to address groundwater contamination associated with several Solid Waste Management Units (SWMUs) and AOCs identified on the Base. The focus of this report is on the groundwater monitoring conducted at AOC 1. The site objectives were established in order to collect the data necessary to attain site closure under the TNRCC's PST Division. Monitoring activities performed for AOC 1 in 2000 included:

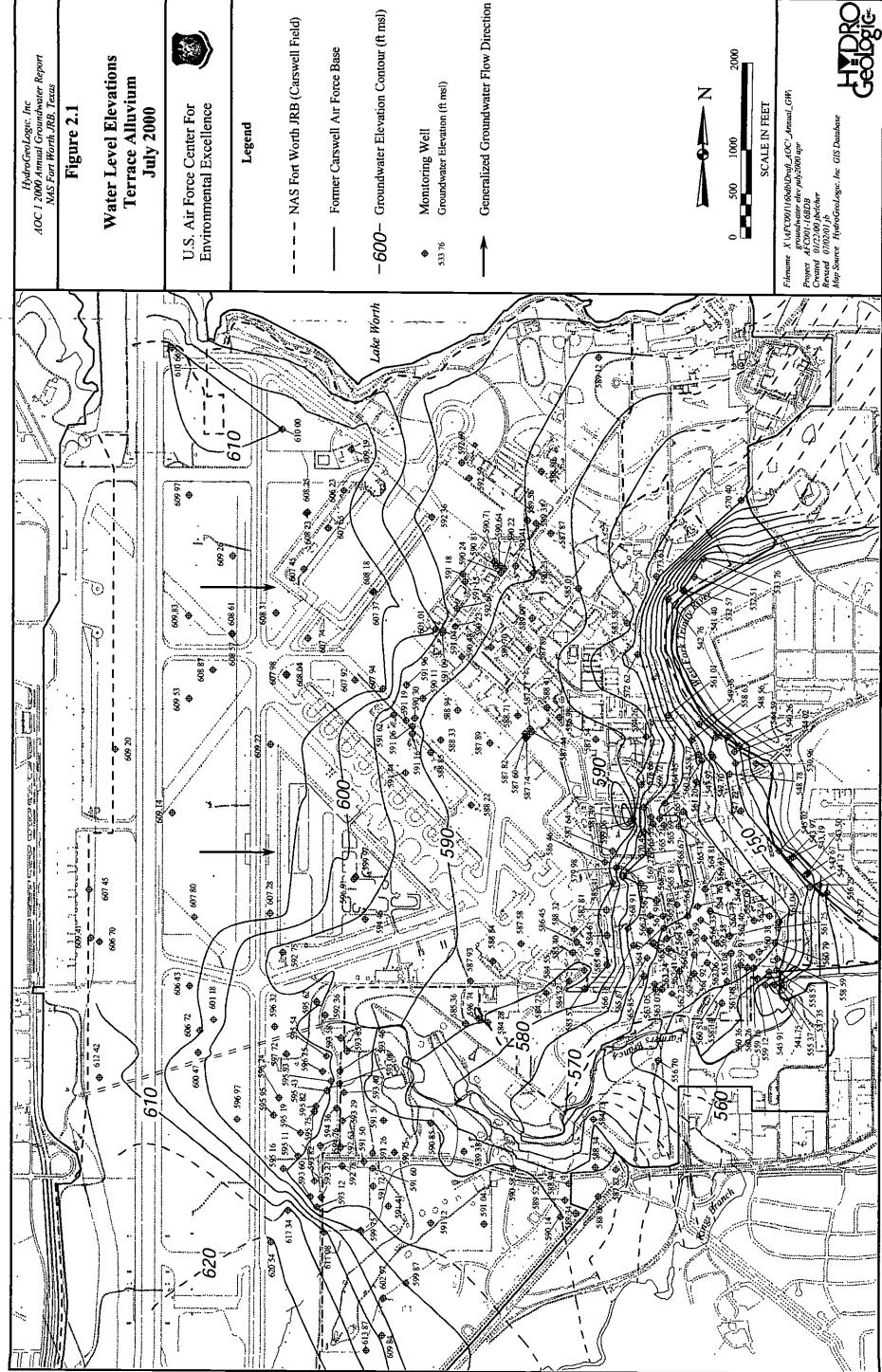
- Installation of Off-Base Monitoring Wells
- Field Parameter Collection
- Well Purging and Sample Collection at On-base and Off-base Monitoring Wells
- Surface Water Sample Collection at West Fork Trinity River
- Chemical Analyses of Field Samples
- Laboratory and Field QA/QC Analysis
- IDW Management

#### 2.1.1 Monitor Well Installation

After submitting a Site Closure Request (TNRCC-0028) for AOC 1 in 1999, the TNRCC's PST Division determined that the site did not meet closure status due to the close proximity of the contaminant plume to the West Fork Trinity River and the apparent off-base migration of contaminants (TNRCC, 2000). The TNRCC requested additional sampling to verify both plume stability and that no off-site migration was occurring into the river. This action was deemed necessary because the West Fork Trinity River is considered a public water supply.

Three groundwater monitor wells were installed off-site between the eastern base boundary and the West Fork Trinity River. The location of the three wells was selected based on proximity to the known contaminant plume limits (Figure 1.2). These monitoring wells (WHGLTA036, WHGLTA037, and WGHLTA038) were installed in April 2000 and sampled in May and October 2000.

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#### 2.1.2 Field Parameters

#### 2.1.2.1 Water Level Measurements

In order to evaluate existing groundwater flow patterns, groundwater elevations were obtained during the July 2000 base-wide groundwater monitoring event from 273 monitoring wells screened in the Terrace Alluvium (Figure 2.1). Groundwater elevation varied from 620 feet above mean sea level (MSL) in the southwestern portion of the base to 529 feet MSL in the eastern portion of the base during July 2000. The hydraulic head gradients toward the eastern portion of the base are greater than those on the western portion. The groundwater gradient ranges from approximately 0.009 to 0.015 feet/foot throughout the entire base.

In general, the regional groundwater flow direction is from west to east, though local variations in groundwater flow direction are evident. The groundwater flow direction in the Terrace Aquifer is primarily eastward towards the basin formed by the West Fork Trinity River. The prevalent groundwater flow in the area surrounding both subject sites is toward the river, which is located approximately 500 feet east of the Base Service Station. The gradient in this area ranges from 0.04 to 0.16 feet/foot, due to the entrenched nature of the river (IT, 1996). The river is situated approximately 25 feet below the west bank. The greater hydraulic gradient has effectively increased the rate of contaminant migration away from the Base Service Station, creating a larger plume.

Following the external inspection of each monitoring well, and immediately after the well cap had been removed, a photoionization detector was used to measure the level of organic vapors in the background area, breathing zone, and at the top of each well casing (HydroGeoLogic 2000b). There were no monitoring wells at either the Base Gas Station or the Base Service Station that contained free-product during either groundwater sampling event in 2000.

#### 2.1.2.2 Field Stabilization Criteria

During all purging, water quality stabilization criteria (pH, temperature, electrical conductance [EC], dissolved oxygen [DO], oxidation-reduction potential [Eh], and turbidity) were continuously monitored using a flow-thru cell. Section 4.2 provides a summary of Year 2000 field stabilization parameters at AOC 1 and all field sampling data sheets are presented in Appendix A.1. If the sampled monitoring well was not experiencing significant drawdown while being purged (i.e., the water column did not drop more than 0.33 feet), and the following water quality stabilization parameters were met after three consecutive readings, then a sample was collected.

- Temperature: ± 1.0 C
- pH:  $\pm 0.1$  units
- EC: ± 3 percent
- DO: ± 10 percent
- Eh: ± 10 mV, and
- Turbidity: <10 NTUs</li>

#### 2.1.3 Well Purging and Sample Collection

There were no monitoring wells with dedicated pumps sampled at AOC 1. Thus, all nine monitoring wells were sampled using non-dedicated stainless steel bladder pumps. The bladder pump is ideal for low-flow purging and can maintain pumping rates between 0.1 to 0.5 liter/minute to minimize turbidity, oxygenation, mixing of chemically distinct zones, and volatilization of volatile organic compounds (VOCs).

Once stabilization of the water quality parameters had been met during the purging process, the groundwater samples were collected. Required sample containers, preservation methods, volumes, and holding times are provided in Section 5.0 of the QAPP (HydroGeoLogic, 2000c).

#### 2.1.4 Laboratory and Chemical Analysis Selection

Nine monitoring wells were utilized for water level measurements and analytical sampling during this investigation. Monitoring wells considered in selecting sampling locations included previous wells with high groundwater contaminant concentrations, and wells downgradient of the sites that could assist in determining the lateral migration of groundwater contamination. The analyses selected for groundwater monitoring were based on the TNRCC regulatory guidance document, Groundwater Monitoring and Reporting (TNRCC, 1996b). Table 2.1 includes a list of the monitoring wells selected for sampling at AOC 1 and the analysis performed at each well.

#### 2.1.5 Laboratory and Field QA/QC Analysis

The laboratory and field QA/QC program at NAS Fort Worth JRB included specific procedures regarding sample volumes, container types, and preservation requirements for the collection of groundwater samples as described in the Final Basewide GSAP (HydroGeoLogic 2000b). Sample bottles met EPA requirements for environmentally clean containers. Sample labels were pre-printed to facilitate sample tracking from the field through the laboratory to the final report. Documentation of sample collection is performed in the field to ensure that sample labeling, chain-of-custody (COC), and request for analysis are in agreement and traceable back to the correct field sample. Custody seals were placed on each cooler before shipment by a common carrier. Additional laboratory and field QA/QC information can be found in Section 3.0.

#### 2.1.6 Investigation Derived Waste (IDW) Management

IDW management procedures were followed as outlined in Final IDW Management Plan (HydroGeoLogic 1999). All wastewater (i.e., purge water, decon water) produced during the groundwater sampling events were transferred to a 1200-gallon polytank located on base in the designated IDW storage area. At the completion of each sampling event, a composite sample was collected from the polytank and analyzed for the appropriate suite of parameters (i.e., VOCs (SW8260B), semivolatile organic compounds (SVOCs) (SW8270C), total metals (SW6010B), Pesticides/Polychlorinated Biphenyls (PCBs) (SW8080), and TPH (TX1005). Final disposal of the wastewater was conducted on base and discharged into the base sanitary sewer system, upon approval by the U.S. Navy Environmental Office. Appendix B contains copies of the IDW disposal log records for the purge and wastewater.

Table 2.1
AOC 1 Monitoring Wells and Analyses
NAS Fort Worth JRB

Sampling Event	Monitoring Well	Sample Parameters <sup>1</sup> VOCs
April 2000	BGSMW03	Х
	BGSMW05	х
	BGSMW06	X
	MW-5	X
	SAV-2	x
	MW-10	х
	MW-11	х
	WHGLTA036	х
	WHGLTA037	х
	WHGLTA038*	Х
October 2000	BGSMW03	Х
	BGSMW05	х
	BGSMW06	х
	MW-5	х
	SAV-2	Х
	MW-10	х
	MW-11 <sup>b</sup>	х
	WHGLTA036	х
	WHGLTA037	х
	WHGLTA038 <sup>a</sup>	х

Notes.

VOCs -Volatile organic compounds (EPA Method SW8260B)

All samples were tested for the following standard field parameters: temperature, pH, specific conductivity, DO, Eh, and turbidity.

<sup>&</sup>lt;sup>a</sup> - Monitoring well could not be sampled due to being dry.

b - Monitoring well could not be sampled due to tree roots penetrating well casing. Later this year, the monitoring well will be abandoned

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SECTION 3.0

## 3.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

This section describes the analytical methods and QC procedures used throughout the basewide quarterly monitoring events and AOC 1 groundwater monitoring at NAS Fort Worth JRB, Texas.

## 3.1 FIELD QUALITY CONTROL

During 2000 AOC 1 field activities, field QA/QC samples were used to determine the overall quality of the analytical data. The field QA/QC samples collected and evaluated for sampling technique and decontamination include ambient blanks, equipment blanks, trip blanks, and field duplicates. The validated field QA/QC sample results are summarized in Appendix C.2.

### 3.1.1 Ambient Blank

Ambient blanks consisted of American Society for Testing and Materials (ASTM) Type II reagent grade water poured into a 40 milliliter VOC sample vial at a sampling site (in the same vicinity as the associated samples). Ambient blanks are used to assess the potential introduction of contaminants from ambient sources (e.g., active runways, engine test cells, gasoline motors in operation, etc.) to the investigative samples during sample collection. Ambient blanks were handled like environmental samples and transported to the laboratory and analyzed for VOCs during both April and October sampling events.

No ambient blanks were collected during either 2000 sampling event. There were no potential interferences from any of the above sources identified while sampling occurred.

## 3.1.2 Equipment Blanks

Equipment blanks consisted of ASTM Type II reagent grade water poured into, over, or pumped through the sampling device; collected in a sample container, and transported to the laboratory for analysis. Equipment blanks were used to assess the effectiveness of the field equipment decontamination procedures. Throughout each of groundwater sampling events, one equipment blank was collected from sampling equipment used on each day that equipment decontamination activities occurred. Equipment blanks were collected immediately after the equipment was decontaminated. Each equipment blank was analyzed for all laboratory analyses requested for the environmental samples collected at any associated site on that day.

Four equipment blanks were collected during both monitoring events; two in April and two in October. While no VOC contaminants were detected in October, methylene chloride and chloroform (extraction solvents) were detected in the April blanks. There was no equipment blank contamination that affected the samples during either sampling event.

## 3.1.3 Trip Blanks

Trip blanks consisted of 40 milliliter VOC sample vials prepared and provided by the laboratory

with ASTM Type II reagent grade water. Trip blanks are transported to the sampling site, handled as an environmental sample, and returned to the laboratory for the analysis of VOCs. One trip blank is used per sample cooler to assess the potential introduction of contamination into investigation samples from unrelated sources, such as cross contamination occurring during transportation and storage.

Six trip blanks were analyzed during both groundwater monitoring events, with no contamination affecting any of the groundwater samples (Appendix E).

## 3.1.4 Field Duplicates

Field duplicates were collected at a frequency of 1 for every 10 environmental samples to assess the precision of the sample collection process. Field duplicate samples were collected at the same time, (or in immediate succession) and location as the environmental sample ("parent" sample). The parent and duplicate sample are treated in an identical manner during transportation, storage, preparation, and analysis. There were two field duplicates submitted in association with the samples collected at AOC 1. There were no deviations in results between the field duplicate and parent sample in either sampling event. All field duplicate results met project precision criteria.

## 3.2 SAMPLE TRACKING PROTOCOL

Each field sample was assigned a unique identification number that described where the sample was collected. The number consists of a maximum 12-digit alphanumeric code as follows:

xxxxxxxxzzaa

where:

XXXXXXXX	represents the well identification or well name (e.g., SPOT35-5, WHGLTA009)
zz	represents the medium (WG for water-ground)
aa	indicates the sample event number for groundwater (e.g., 01, 02, 03, etc.)

For example, the groundwater sample collected during event four from SAV-2 was identified as "SAV-2WG01." In order to ensure that field duplicates were analyzed 'blind' by the laboratory, each field duplicate sample was assigned a unique sample identification number, that did not associate the duplicate with its parent sample (e.g., DUP01, DUP02, etc). Field duplicate locations were determined prior to mobilization. Documentation was maintained in the field sampling log book, and on the sample collection log, to track all field duplicate samples (Appendix A.1 and A.2).

QC samples were identified by use of a similar system of identifiers with a maximum of 10 characters. The QC sampling number system is summarized below:

xxyyyyyy

where:

represents the medium (EB for equipment blank, TB for trip blank, AB for ambient blank)

yyyyyy represents the date (month, day, year)

For example, an equipment blank obtained on October 24, 2000 would be identified as EB102400. Documentation was maintained in the field sampling log book, and on the sample collection log, to track all field QC samples (Appendix A.1 and A.2).

The Project Geologist/Field Coordinator maintained a list detailing the connection between each QC sample and specific environmental samples. For instance, each trip blank was correlated with a particular set of samples shipped to the laboratory in the same cooler, and each equipment blank was correlated to those samples collected using a particular set of sampling tools on a specific date.

After the laboratory data were received and prior to validation, the laboratory's electronic data deliverable (EDD) was reviewed to ensure that it was complete, correct, and compliant with the Air Force's Environmental Resources Program Information Management System, (ERPIMS) format. Once the EDD was approved, data entry and QC operations were performed using the validation reports.

## 3.3 LABORATORY QUALITY CONTROL

The laboratory QC program, including sample handling, laboratory QC elements, and data reporting, is fully documented in the Final Basewide QAPP (HydroGeoLogic 1998). Sample handling includes documentation of sample receipt, placement in storage, controlled sample access, and disposal. Laboratory QC elements consist of instrument calibration and maintenance, laboratory control samples, method blanks, and matrix spike/matrix spike duplicate samples, and method-specific QC checks. Reporting of the laboratory control data was planned prior to the collection of the data, allowing the laboratory to place the appropriate information into each data package so that the data quality evaluation could be performed in a timely manner.

## 3.4 ANALYTICAL METHODS

This section includes brief descriptions of the methods used and their recommended holding times. The methods were taken from *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (U.S. EPA SW-846, Third Edition, and its first and second update), *Methods for Chemical Analysis of Water and Waste* (U.S. EPA 1979), *ASTM Annual Book of Standards* (1993), and from manufacturers' literature. More information regarding each method can be found in the Basewide QAPP (HydroGeoLogic, 2000).

## 3.4.1 EPA Method SW8260B - Volatile Organic Compounds

Volatile (or purgeable) organics in water were analyzed using method SW8260B. This method uses a capillary column GC/mass spectrometry technique. Volatile compounds are introduced into the GC by purge and trap (SW5030A). An inert gas is bubbled through the water samples to transfer the purgeable organic compounds from the liquid to vapor phase. The vapor is then swept through a sorbent trap where the purgeable organics are trapped. The trap is back flushed and heated to desorb the purgeable organics onto a capillary GC column where they are separated and then detected with a mass spectrometer. The maximum recommended sample holding time for this analysis is 14 days for preserved water samples and 7 days if unpreserved by acid. All holding times were met for this analysis.

## 3.4.2 EPA Method TX1005 - Total Petroleum Hydrocarbons

This gas chromatographic method is designed to determine the total concentrations in soil or water of petroleum hydrocarbons from n-hexane ( $C_6$ ) to n-octacosane ( $C_{28}$ ); these hydrocarbons have an approximate boiling point range from 65° to 450° C. This range includes gasoline, kerosene, diesel/fuel oil No. 2, some light lubricating oils, and some portions of other heavier fuel oils and lubricating oils.

The method uses flame ionization (FID) as the mode of detection. The response of the FID is generally equal for all hydrocarbons on a weight and effective carbon number basis. The maximum recommended sample holding time for this analysis is 28 days.

## TAB

SECTION 4.0

## 4.0 NATURE AND EXTENT OF CONTAMINATION

Groundwater samples were collected in April and October 2000. In addition, three surface water samples were collected on the west bank of the West Fork Trinity River in December 2000 in order to verify possible surface water contamination. Laboratory summary reports are presented in Appendix D.

## 4.1 TARGET CONCENTRATIONS

Target concentrations are the maximum allowable contaminant concentrations in the particular contaminated media that are protective of human health and groundwater quality. The values provide the responsible party with a target clean up concentration which is to be used to help restore the site without the use of institutional controls protective of human health.

Five categories of Plan A Target Concentrations have been established by the TNRCC that consider either actual or potential beneficial groundwater usage. Category I, II, III, and IV beneficial usage of groundwater is based on the presence of impacted or threatened water supply sources and the quality of the water present in the affected zone of the aquifer. Category V is used when a beneficial groundwater use cannot be established. This category considers effects on soils only. The impacted or threatened water supply source applies to a drinking water source within the same or connected interval as the affected groundwater zone. The quality of water in the affected zone refers to the potential beneficial use based on the total dissolved solids (TDS) present. The affected groundwater zone at AOC 1 has a Category II beneficial usage based on TDS concentrations less than 3,000 ppm and no known current beneficial use within 0.5 miles of the site (HydroGeoLogic, 2000a).

## 4.1.1 TNRCC PLAN A TARGET CONCENTRATIONS

The Plan A Target Concentrations for groundwater are based on the beneficial groundwater use category. Table 4.1 presents the established groundwater target concentrations for Categories I, II, and III (TNRCC, 1994). In the Plan A Site Assessment submitted for AOC 1, a direct comparison of site conditions was made with the appropriate target concentrations to validate the use of Plan A Category II Target Concentrations.

## 4.2 NATURE AND EXTENT OF GROUNDWATER CONTAMINATION

Both the abandoned Base Gas Station and Base Service Stations have documented groundwater contamination. Fuel constituents have impacted the terrace alluvium underlying AOC 1 as the result of historical leaking USTs and associated fuel lines. Migrating hydrocarbon contamination has been detected downgradient from both sites, eastward toward the West Fork Trinity River. Air Force personnel observed fuel seepage, in addition to a visible sheen on the water's surface, in the river below the Base Service Station in April 1992 (USACE, 1994). The seepage was temporary, as it is no longer observed. Analytical results have determined that hydrocarbon plumes where USTs were located have migrated eastward beyond the NAS boundary.

Table 4.1
Plan A Target Concentrations

		ndwater Conce	ntration (mg/L)
Chemical of Concern	Category I	Category II	Category III
Benzene	0.005	0.0294	0.14
Ethylbenzene	0.7	3.65	5.21
Toluene	1	7.3	10.4
Xylene	10	73	104
Acenaphthene	2.19	2.19	3.13
Anthracene	11	11	15.6
Benzo[a]anthracene	0.000117	0.00117	0.00556
Benzo[b]fluoranthene	0.000117	0.00117	0.00556
Benzo[k]fluoranthene	0.00117	0.0117	0.0556
Benzo[a]pyrene	0 0002	0.000117	0.000556
Chrysene	0.0117	0.117	0.556
Dibenzo[a,h]anthracene	0.0000117	0.000117	0.000556
Fluoranthene	1.46	1.46	2.08
Fluorene	1.46	1.46	2 08
Indeno[1,2,3-cd]pyrene	0.000117	0.00117	0.00556
Naphthalene	1.46	1.46	2.08
Ругепе	1.1	1.1	1.56

Notes:

Category I, II, and III Target Concentrations taken from Appendix A, Table A-1 of RG-36 (TNRCC, 1994)

## 4.2.1 CURRENT INVESTIGATION

Groundwater samples were collected from nine of ten monitoring wells at AOC 1 during April, with just eight wells sampled in October 2000. Monitoring well WHGLTA038 had insufficient groundwater for sampling during both April and October 2000, while MW-11 had damaged casing in October. This prevented the bladder pump from being lowered into the monitoring well. The surface water from the West Fork Trinity River was sampled in October to determine the existence of dissolved phase hydrocarbon contamination in the surface water.

Prior to any environmental sampling, field parameters were monitored until the designated stabilization criteria were obtained for temperature, pH, conductivity, DO, oxidation reduction potential, and turbidity (Table 4.2). Once field parameters stabilized, the environmental samples were collected and analyzed for VOCs (EPA Method SW8260B).

Table 4.2 2000 AOC 1 Field Parameters NAS Fort Worth JRB, Texas

Monitoring Well	Ph	Temperature (C)	Electrical Conductance? (µS/Cm)	Dissolved Oxygen (Mg/L)	Oxygen Reduction Potential <sup>4</sup> (Mv)	Turbidity <sup>5</sup> , (Ntu)
April 2000						
BGSMW03	6.70	22.54	508	1.89	-97.3	2.28
BGSMW05	7.35	20 32	297	4.76	12.4	1.72
BGSMW06	7.21	21.62	373	4.59	-99.8	8.92
MW-5	7.26	19.18	212	2.01	89.5	18.3
SAV-2	6.80	18.57	423	0.98	-115	8.38
MW-10	6.91	20.26	562	1.25	-103	6.04
MW-11	6.97	19.17	996	2.10	-25.1	8.79
WHGLTA036	6.89	28.06	672	0.89	-109.9	12.94
WHGLTA037	6.67	22.83	566	5.40	-62.5	30.8
WHGLTA038 <sup>b</sup>	-	-	-	-	-	-
October 2000						
BGSMW03	7 39	23.6	826	0.85	-102.6	2.0
BGSMW05	7.54	21.63	702	0.97	155.2	1.05
BGSMW06	7.67	25.46	686	1.95	-109.9	11.53
MW-5	8.10	23.08	295	0.75	-116.4	9.21
SAV-2	7.24	25.28	817	1.31	-97.6	5.5
MW-10	7.43	22.42	916	1.14	-99.7	3.1
MW-11*	-	-	-	-	-	-
WHGLTA036	6.90	24.3	1,099	1.01	179	3.2
WHGLTA037	7.30	23.65	1,145	1.13	-111	2.23
WHGLTA038 <sup>b</sup>	-	-	-	_	-	-

## Notes.

Temperature was measured in degrees Celsius (C)

- <sup>2</sup> Conductance was measured in microSiemens per centimeter (µS/cm)
- Dissolved oxygen was measured in milligrams per liter (mg/L).
- Oxygen Reduction Potential was measured in millivolts (mV).
   Turbidity was measured in nephelometric turbidity units (NTUs).
- \*- MW-11 casing was damaged in October, thus unable to lower the bladder pump

## 4.2.2 PREVIOUS INVESTIGATIONS

Previous investigations at the Base Gas Station and the Base Service Station have detected hydrocarbon contaminants that were believed to be a direct result of leaking USTs or associated

<sup>.</sup> WHGLTA038 was dry both times sampling was conducted

piping. The Base Gas Station has not been investigated as extensively as the Base Service Station. Groundwater that had leached into the pits during excavation of the Base Gas Station UST's indicated elevated concentrations of TPH, BTEX, and lead (IT, 1996). But groundwater analysis from samples collected from MW-3 indicated no BTEX or TPH contamination. It is apparent that lateral migration of contamination from the excavated pits did not occur, with only localized contamination existing today.

When the Base Service Station was added to the IRP in 1987, an initial site investigation was performed under Stage 2, which included the installation of three monitoring wells (BSS-A, BSS-B, and BSS-C) and one soil boring. Multiple groundwater investigations were conducted in 1992 to identify and monitor the contaminated impacted areas of the Base Service Station. Monitoring wells MW-1 and MW-2 were installed east of the site at this time, while MW-3 was installed west (upgradient) of the station. Leak tests performed on the USTs identified two tanks that tested product loss rates of 0.75 gallons per hour. The TWC subsequently issued a 9-point corrective action letter on the site (IT, 1996).

Monitoring wells MW-4, MW-5, and MW-6 were installed near the former Base Service Station UST sites. There were two areas at the station that contained dissolved phase BTEX and TPH compounds: north of the excavated tank area (MW-4 and BSS-B), and downgradient of the tank excavation at monitoring wells SAV-1, SAV-2, MW-2, and MW-10. TPH was detected in well BSS-B at a concentration of 20.0 mg/L, along with BTEX concentrations of 45.88 mg/L. According to Carswell AFB records, monitoring well BSS-B previously contained several inches of free product, though later investigations detected none. TPH concentrations detected in monitoring wells SAV-2 and MW-10 were 9.0 mg/L and 9.8 mg/L, respectively. Elevated BTEX compounds were detected at 33.50 mg/L in SAV-2 and at 46.07 in MW-10 (USACE, 1994). Elevated metals and polycyclic aromatic hydrocarbons (PAHs) were also detected in these downgradient monitoring wells.

In April 1992, a petroleum seep 65 feet in length was observed along the West Fork Trinity River, approximately 500 feet downgradient from the Base Service Station (USACE, 1994). A Notice of Violation for the release was issued by the Texas Water Commission, and subsequently gasoline sales were terminated. Groundwater that was collected within the pit during the tank excavation in 1993 indicated BTEX, TPH, and lead contamination (WC Environmental, 1993).

Groundwater discharging into the drainage ditch that runs parallel to Military Parkway in front of the Base Service Station had BTEX concentrations of 225.7 mg/L (USACE, 1994). This site, along with the seepage into the West Fork Trinity River, continue to pose the greatest risk for exposure to contamination. The contamination appears to extend only to the base of the upper groundwater zone (Terrace Alluvium), not including the Paluxy Formation.

## 4.2.3 DISCUSSION OF GROUNDWATER IMPACT AT AOC 1

The contaminated groundwater at AOC 1 extends laterally mainly eastward due to the hydraulic gradient toward the river basin. Groundwater elevations indicate recharge to the West Fork

Trinity River is occurring where the contaminated seepage had been observed (IT, 1996). A total of nine compounds were detected in the groundwater. Benzene, ethylbenzene, and toluene were detected above the Category II target concentrations set by the TNRCC PST Division. Tables 4.3a and 4.3b provide the 2000 analytical results and associated Plan A target levels.

### 4.2.3.1 Assessment of VOC Data

The three constituents that were detected in the groundwater samples that exceeded the Category II target concentrations were benzene, ethylbenzene, and toluene. They were detected in the following monitoring wells: MW-10, SAV-2, BGSMW03, and WHGLTA037 (see Figure 4.1). All wells except BGSMW03 are located downgradient from the Base Service Station. Appendix C.1 provides an overview of all laboratory analytical results derived from groundwater sampling.

Elevated benzene concentrations that exceeded the PQL were detected in the following monitoring wells in April 2000: BGSMW03, MW-5, MW-10, SAV-2, WHGLTA036, and WHGLTA037. Benzene concentrations ranged from 0.001 mg/L to 4.3 mg/L. Ethylbenzene concentrations exceeded laboratory PQLs in five monitoring wells, ranging from 0.003 mg/L (WHGLTA036) to 5.0 mg/L (WHGLTA037). Toluene also was detected above PQLs in five monitoring wells, with concentrations ranging from 0.003 mg/L (WHGLTA036) to 8.0 mg/L (WHGLTA037). Monitoring well WHGLTA037 contained both ethylbenzene and toluene at concentrations exceeding the Category II target concentrations. Xylenes were detected in six monitoring wells sampled in April 2000, though none exceeded the Category II target concentration of 73 mg/L.

In addition to VOC analysis, TPH was analyzed for screening purposes in the newly installed monitoring wells WHGLTA036 and WHGLTA037 in April 2000. TPH contamination was not detected at well WHGLTA036, but was detected at WHGLTA037. Concentrations detected were TPH C<sub>6</sub>-C<sub>10</sub> at 49 mg/L, TPH C<sub>6</sub>-C<sub>28</sub> at 57 mg/L, and TPH >C<sub>10</sub>-C<sub>28</sub> at 8.2 mg/L. A Category II Target Concentration level for TPH has yet to be established.

In October 2000, benzene, toluene, and ethylbenzene continued to exceed the Category II target concentrations in the same monitoring wells; MW-10, SAV-2, BGSMW03, and WHGLTA037. Benzene was detected in seven monitoring wells above laboratory PQLs, with concentrations at SAV-2, MW-10, and WHGLTA037 detected above the Category II target concentrations set by the TNRCC. Benzene concentrations ranged from 0.001 mg/L (WHGLTA036) to 3.6 mg/L (WHGLTA037). Ethylbenzene exceeded the Category II target concentrations at monitoring well WHGLTA037 (3.9 mg/L) and MW-10 (3.7 mg/L). Ethylbenzene was detected in five monitoring wells at AOC 1 in October 2000. Toluene was detected in four monitoring wells, ranging from 0.019 (BGSMW.3 and SAV-2) to 3.4 mg/L (WHGLTA037), while total xylenes were detected above the PQL at wells BGSMW03, MW-10, SAV-2, and WHGLTA037. However, either toluene or total xylenes contaminant concentrations exceeded the Category II target concentrations.

BTEX concentrations were detected below Category II target concentrations in monitoring wells downgradient of the Base Gas Station (BGSMW05 and BGSMW06). It is apparent that the former Base Gas Station has localized hydrocarbon contamination within the excavated area

where BGSMW03 and the former ASTs were located. VOC concentrations in the monitoring wells downgradient from the station ranged from 0.0006 mg/L to 0.0009 mg/L. This same principle is inaccurate when applied to the former Base Service Station. Monitoring well MW-5, located in the excavated UST area, was non-detect for BTEX compounds in the October 2000 sampling event and had a detection of benzene (0.001 mg/L) in April 2000. However, three of four monitoring wells downgradient from the former service station site had elevated VOC contamination exceeding Category II target concentrations. This contamination has extended to the West Fork Trinity River, where hydrocarbon seepage has been documented.

49

Concentrations of Organic Constituents in Groundwater at AOC 1, April 2000 NAS Fort Worth JRB, Texas

Anolytical Darameter		A FAGE	in the second		Sam	Sample Location	tion		,	بالاستراجي والأناب
malysical ralamites	Plan A <sup>1</sup>	RCSMW03	BGSMW05		MW-5	SAV-2	MW-10	MW-11	BGSMW06 MW-5 SAV-2 MW-10 MW-11 WHGLTA036 WHGLTA037	WHGLTA037
	0.0294	(2.3)			0.001	(0.33)	(1.4)	Ð	0.002	(4.30)
Ethylbenzene	3.65	0.22	Ð	QN	Æ	0.26	3.5	QN	0.003	(5.0)
Toluene	7.3	0.021	£	QX	<del>Q</del>	0.012	0.49	QN	0.003	(8.0)
Total Xylenes	73	0.148	£	0.000	QN	0.204	9.7	ON	0.010	14.5
Naphthalene	1.46	QN	QN	QN.	QN	QZ	Q	QZ	0.00	1.3
Acenaphthylene	2.19	QN	S	Ð	Ð	Ð	Ð	QN	0.1	QN
TPH (>C10-C28)	NE	QX	Q	QN	Æ	Q	Ę	QN	CZ.	8.2
TPH (C6-C28)	NE	QX	Q	Q.	QZ	QN	QN	QN	QN	57
TPH (C6-C10)	NE	Q.	QZ	ON	R	Œ	ND	ND	ND	49

I Plan A Category II Target Groundwater Concentrations.

2 Parentheses ( ) indicate concentrations exceeding Plan A Target Concentrations for Category II sites

Result is detected and the quantitation is an estimation.

Result is detected but the associated numerical value is below the detection limit. Result was rejected during data validation due to deficiencies in the QC criteria.

Not analyzed

Category II Target Concentration is not available for the constituent

# Concentrations of Organic Constituents in the Groundwater at AOC 1, October 2000 NAS Fort Worth JRB, Texas Table 4.3b

Analytical	2 2 E.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The state of the s	*		Sam	Sample Location <sup>2</sup>	ion <sup>2</sup>	, ;	- F		"我一个是我的一个一个
Parameter		で の は は は は は は は は は は は は は は は は は は			,	小湖	W. 67 4. W.	WHGLTA	***** WHGLTA WHGLTA UHGLA UHGEA UHGLA	UHGLA	UHGEA	UHGLA
(mg/L)	Plan A	<b>BGSMW03</b>	BGSMW05	BGSMW06 MW-5 SAV-2 MW-10 = .036037 = OC10101 OC10201 OC10301	MW=5	SAV-2	MW-10	× .036	037	OC10101	OC10201	OC10301
Benzene	0.0294	2.0	Ð.	9000'0	QX	(9 0)	(1.1)	0.001	(3.6)	ND	0.0004	ND
Ethylbenzene	3.65	0.02	QN	9000'0	QZ	1.0	(3.7)	QN	(3.9)	QN	ND	ON
Toluene	7.3	0.019	QN.	QN	S	0.019	0.41	QN	3.4	ND	ND	ND
Total Xylenes	73	0.057	0.0006	0.0008	£	0.73	7.0	9000.0	13.1	QN	ND	ND

Notes:

1 Plan A Category II Target Groundwater Concentrations

2 Parentheses () indicate concentrations exceeding Plan A Target Concentrations for Category II sites J Result is detected and the quantitation is an estimation

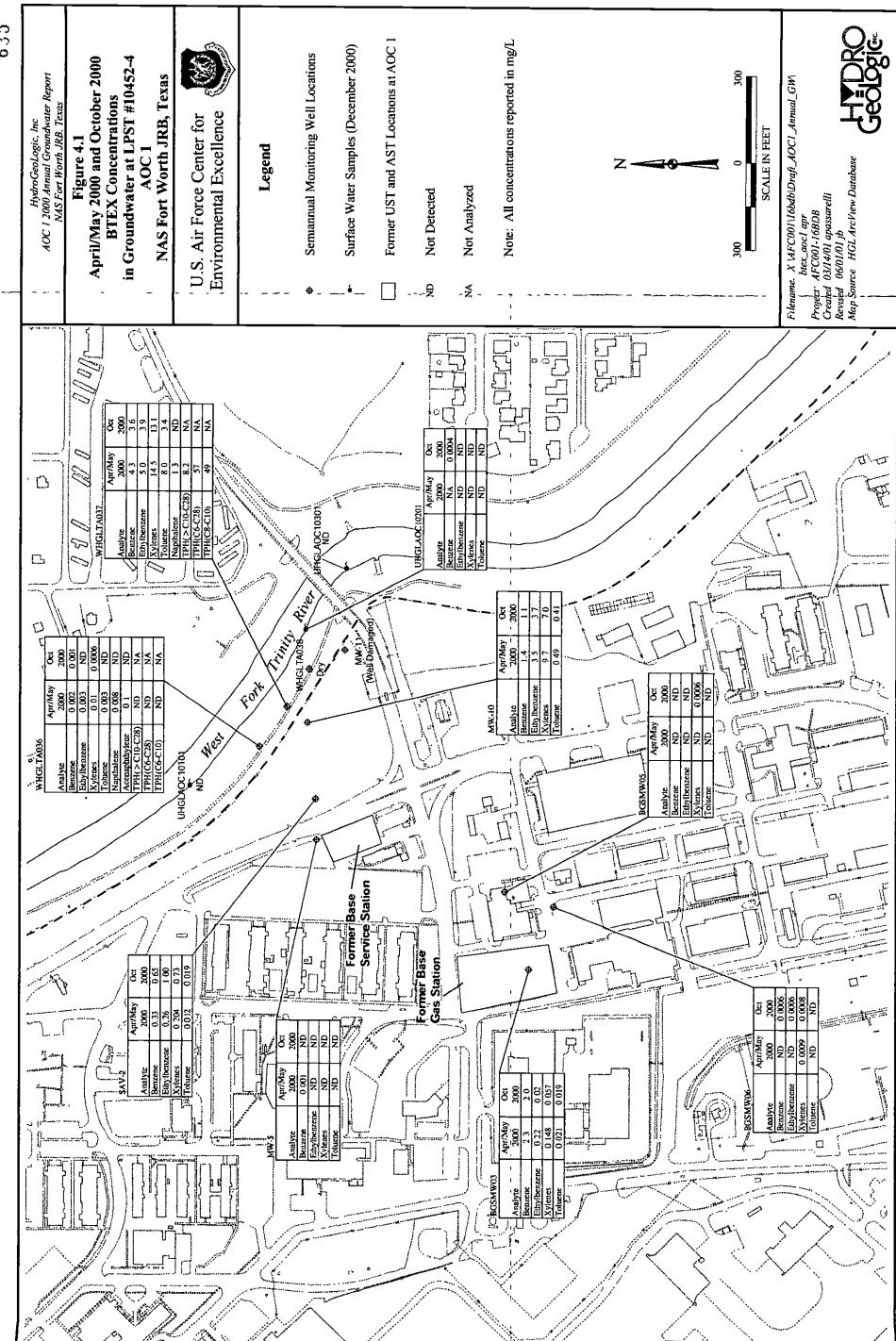
F Result is detected but the associated numerical value is below the detection limit.

R - Result was rejected during data validation due to deficiencies in the QC criteria

NA - Not analyzed

. Category II Target Concentration is not available for the constituent

Non Detect.



## TAB

SECTION 5.0

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

This section includes a summary of the results obtained from the 2000 groundwater monitoring activities at AOC 1. Recommendations for appropriate actions to be performed in order to achieve site closure under TNRCC's PST Division will also be addressed in this section.

The TNRCC requested groundwater monitoring at AOC 1 to verify plume stability and that no off-site migration has occurred toward the West Fork Trinity River. In order to verify plume stabilization, HydroGeoLogic performed semiannual groundwater monitoring at nine monitoring wells for VOCs (EPA Method 8260B) in April 2000 and eight wells in October 2000. Of these nine wells, four exceeded the Plan A Target Concentration criteria for BTEX constituents, with all but one (MW-11) indicating BTEX contamination above laboratory PQLs. It is apparent that releases at the PST sites have directly impacted groundwater, creating a contaminant plume that extends eastward toward and beyond the base boundary.

Analytical results obtained during the semiannual groundwater monitoring events provided evidence of localized contamination confined to the excavated area at the Base Gas Station, but lateral contamination persists at the Base Service Station. Plume concentrations appear to have stabilized both north and south of the Base Service Station. However, releases from fuel lines and USTs have created a contaminant plume, which extends eastward past the installation boundary, toward the west bank of the West Fork Trinity River. This is currently considered a potential pathway via direct exposure of contamination as a result of base-related activities.

Figure 4.1 depicts the contamination present in the following monitoring wells that exceed the Plan A Target Concentrations set by the TNRCC. Well BGSMW03 is located in the former excavation area at the Base Gas Station, while SAV-2, MW-10, WHGLTA037 are located downgradient from the Base Service Station. The presence of fuel hydrocarbons migrating toward the West Fork Trinity River currently prevents AOC 1 from meeting the appropriate closure requirements under the TNRCC PST early exit criteria process. Therefore, continued monitoring of all site wells will occur for two additional quarterly sampling events, at a minimum, to document dissolved phase concentrations.

In order to proceed toward site closure at AOC 1, HydroGeoLogic will monitor the following monitoring wells: BGSMW03, BGSMW05, BGSMW06, SAV-2, MW-5, MW-10, WHGLTA036, WHGLTA037, and WHGLTA038. These nine wells will be sampled quarterly in April and July 2001 for VOCs (Method SW8260B). In addition, surface water samples will also be collected at the three sites on the West Fork Trinity River in July 2001 (see Figure 4.1 for sampling locations). The purpose for collecting and analyzing surface water is to verify that the Hydrocarbon plume is not actively discharging into the river in significant concentrations. At the completion of both sampling events, HydroGeoLogic will reevaluate the groundwater conditions at AOC 1. A revised Plan B Risk Based Site Assessment will be completed for this site, which will include recommendations for corrective action.

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## TAB

SECTION 6.0

### 6.0 REFERENCES

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## TAB

APPENDIX A

## APPENDIX A.1 GROUNDWATER FIELD SAMPLING DATA SHEETS

Well No.: MW-5	Location: NAS Fort Worth JRB
Sampler(s): Whate SStanford	Project Name: AOC 1
Well Depth: 8.0'	Project #: AFC001-16BBD Date: 4.11.00 Time: /508
DTW (ft): 3.24' DTP (ft): N/A	Courier: FedEx UPS Hand Other
MP Ht. Above/Below Ground Surface: 1.58	Sampling Method: Low Flow
Condition of Bottom of Well.	Type of Pump: Bladler
Screen Interval (ft): 3.5 - 11	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in):	wisome sun, 5, 80°F
Placement of Pump (ft): ~ 6.0'	

## Field Parameters

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Time	Depth to	Flow	Total	⊊ pH ≥	Temp.	Cond.	ORP	DO W	Turb. (NTU)	Type, Size, and Amount
Time	Water (ft)	Rate	Volume (L)	CPH 2	Temp (C)	(umhos/cm)	(my)	ま(mg/le)	I (NTU)	Type, Size, and Amount of Sediment Discharged
		(八百)法	3%(C)(%)	类类构造	AL PLAN	學的學	23.47	*A.Z.(2)	BANKEY:	(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1996)(1
1510	3.46	0.7	0	7.35	19.47	ଅଟ.ଦ	87.1	5.17	32.5	clar
1513	3.46	0.3	0.6	30 7÷	19.39	214.0	90.5	3.36	26.6	11
1516	3.47	0.2	1.2	7.29	19.17	212.0	40.5	2.61	24.8	11
1519	3.44	0.2	1.8	4.28	19.15	211.0	90.4	⊋.33	22.8	14
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1524	3.47	0.2	3.0	7.27	19.24	311.0	89.6	2.15	19.2	4
1527	3.47-	0.2	3.6	4.26	19.18	212.0	89.5	2.01	18.3	41
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Well No.: MW-10	Location: NAS Fort Worth JRB
Sampler(s): J. Wallace, C. Williams	Project Name: AOC 1
Well Depth: 32.81	Project #: AFC001-16BBD Date: 4-11-00 Time: 1500
DTW (ft): 15.32 DTP (ft): -	Courier: VFedEx UPS Hand Other
MP Ht. Above/Below Ground Surface: -0.68	Sampling Method: Low Flow
Condition of Bottom of Well: Good	Type of Pump: Bladder
Screen Interval (ft): 11.32 - 31.32	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in): 4	Overcast, 70°, Wind from SE
Placement of Pump (ft): (top): 21'	

## Field Parameters

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Time	Depth to	Flow	Total	pH	lemp.	新 Cond. 新	ORP	DO	Al urb.s	Type, Size, and Amount of Sediment Discharged
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$\overline{}$	15.4	0.2	0.0	6.94	20.38	56b	-100	1.17	7.35	
1503	15.45	0.2	0.6	6.92	20.09	561	-103	0.98	5.90	
1506	15.50	0.2	1.2	6.92	20.15		-104	0.99	5.49	
1509	15.55	0.2	1.8	6.91	20.07		-104	1.15	6.79	
	15.55		2.4	6.91	20.07		-104	1.21	6.23	
1515	15.5%	0.2	3.0	6.91	20.03		-/03		5.99	
1518	15.60	0.2	3.6	6.91	20.26		-/03	1.25		
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Well No: MW-11	Location: NAS Fort Worth JRB	
Sampler(s). NHade Mallace	Project Name: AOC 1	
Well Depth: 32.3	Project #: AFC001-16BBD Date: 4.17.00 Time: 094	<u> </u>
DTW (ft). 26.58 DTP (ft): NA	Courier. K FedEx UPS Hand Other	
MP Ht. Above/Below Ground Surface: -0.73	Sampling Method: Low Flow	
Condition of Bottom of Well:	Type of Pump: Bladder	
Screen Interval (ft): 12 2 - 32.2	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):	
Well Diameter (in):	south 55°F	
Placement of Pump (ft) inlu@~29.5	7	

## **Field Parameters**

	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	pH	Temp.	Cond (umhos/cm)	ORP (my)	DO (mg/L)	Turb. (NTU).	Type, Size, and Amount of Sediment Discharged
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0900	२३.०५	1.0	1.2	6.80	18.69	989	54.6	1.97	12.61	14
0903	27.10	04	1.5	6.86	18.90	992	42.1	1.48	12:49	u
O906	27.16	0.1	1.8	6.88	18.92	992	31.4	1.84	12.70	11
0909	27.18	1.0	2.1	6.90	19.03	993	<b>23.</b> 4	1.74	11.98	ι,
0912	<b>२२.२०</b>	6.1	<i>રુ</i> .પ	6.92	19D7	994	6.2	1.79	14.18	ч
0915	27.21	0.1	2.7	6.94	19.15	996	-9.4	2.26	10.39	
0918	27.20	0.1	3.0	6.95	19.15	996	-16.2	2.20	4.26	4.5
०१३।	27.21	0.4	3.3	6.96	19.15	995	-20 . ಎ	2.07	8.55	\
०१२५	27.22	0.\	3.6	6.97	19.17	996	-25.1	2.10	8.79	11
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Well No.: SAV-2	Location: NAS Fort Worth JRB
Sampler(s): S. Stanford, (. William	Project Name: AOC 1
Well Depth: 18 · 83	Project #: AFC001-16BBD Date: Y-12-00 Time: 0 933
DTW (ft): 13 . 07' DTP (ft): -	Courier:
MP Ht. Above/Below Ground Surface: -1.15	Sampling Method: Low Flow
Condition of Bottom of Well: Some silt	Type of Pump: Bladder
Screen Interval (ft): 5 85 - 18.35	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in):	-
Placement of Pump (ft): (top): 13.0'	Drizzle/Rain; Wind from NW 60°

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0933		0.15	0.0	6.56	18.64		-114	0.88	8.75	
0936	13.14	0.15	0.45	6.64	18.74	425	-117	0.66	7.76	
0939	13.12	0.1	A A A	6.73	18.64	426	-119	0.66	7.63	
0942	13.10	0.1	1.20	6.76	17.66	417	-119	0.88	7.28	
0945	13.10	0.1	1.50	6.76	18.07	418	-118	0.76	7.56	
0948	13.10		1.80	6.78	18.26	420	-117	0.83	7.73	
0951	13.10	_	2.10	6.79	18.35		-117	1.03	7.81	
0954	13.10	0.1	2.40	6.80	18.36		-116	1.02	7.96	
0957	13.10	0-1	2.70	6.80	18.57		-115	0.98	8.38	
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Well No.: BGSMW03	Location: NAS Fort Worth JRB								
Sampler(s): NHale SStanting	Project Name: AOC 1								
Well Depth: 20.55	Project #: AFC001-16BBD Date: V.11-00 Time: 1325								
DTW (ft): 11.59' DTP (ft): NIA	Courier: FedEx UPS Hand Other								
MP Ht. Above/Below Ground Surface: -0.44	Sampling Method: Low Flow								
Condition of Bottom of Well:	Type of Pump: Glaller								
Screen Interval (ft): 10.06 - 20.06	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):								
Well Diameter (in):	S 65°F								
Placement of Pump (ft): -16.5									

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Time	Depth to Water	Flow #	Total Volume	DO DHE	Temp.	Cond (umhos/cm)	ORP (my)	DO (mg/L)	Turb. (NTU)	Type Size; and Amount of Sediment Discharge	ď.
1328	(ft) \$2 11. <b>8</b> 0	<b>※(L/m)</b> 意 <b>ク.2</b>	(L) <u>多</u>	6.74	23.09	533.0	-90.8	1.46	5.93	clear	74.7
1331	11.80	0.2	0.6	6.73	22.91	530.0	-91.9	1.75	4.59	••	٦
1334	11.80	0.2	1.2	6.72	22.68	528.0	-93.6	2.01	3.⊅6	• • •	
1337	11.80	0.2	1.8	6.70	22.60	526.0	-44.5	2.70	2.11	**	
1340	11.80	0.2	ૄ.પ	6.70	27.59	531.0	45.1	2.22	2.94	• •	
1343	11.80	0.2	3.0	6.70	22.55	515.0	-96.3	₽.64	2.81		
1346	11.86	0.2	3.6	6.70	<i>⊋</i> 2.5५	510.0	-97.0	1.45	2.18		
1349	11.80	0.3	4.2	6.70	22.54	508.0	-97.3	1.89	⊋, ⊋8	• •	╝
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Notes:					_			<del></del>	
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Signed	/Sample	r(s):	There	ZL.	de f		,		

Well No.: BGSMW05	Location: NAS Fort Worth JRB
Sampler(s): C. Williams, S. Starford	Project Name. AOC 1
Well Depth: 12.47	Project #: AFC001-16BBD Date: 4-12-00 Time: 1509
DTW (ft): 1.62 DTP (ft): 1/A	Courier: FedEx UPS Hand Other
MP Ht. Above/Below Ground Surface0.32	Sampling Method: Lou flow purgo
Condition of Bottom of Well:	Type of Pump: Bladder
Screen Interval (ft): 7.28 - 12.18	Weather (sun/clear, evercast/rail, wind direction, ambient temperature):
Well Diameter (in):	Weather (sun/clear, evercast/rail, wind direction, ambient temperature):
Placement of Pump (ft): 6.5	

## **Field Parameters**

Time Depth to Flow Total ph Temp Cond ORP DO Turb Type Size and Am Water Rate a Volume (C) (umhos/cm) (mv) (mg/L) (NTU) of Sediment Discharge (nt) (L/m) (L) (L/m) (L/	ount
1509 6.63 9.2 9 7.47 20.03 290.00 8.2 5.02 1.43 6 lear	
1509 6.63 9.2 9 7.47 20.03 290.00 8.2 5.02 1.43 6 lear	Lager
1512 6.65 0.2 0.6 7.38 29.17 299.00 10.6 4.87 1.33 "	
1515 6.65 0.25 1.35 7.36 29.26 275.00 11,6 4.84 1.37 "	
1518 6.65 9.25 2.10 7.35 20.32 297.00 12.4 4.76 1.72	
1518 6.65 9.25 2.10 7.35 20.32 297.00 12.4 4.76 1.72 1521 Collect Samples	

Color:	Clear	Other (	(describe):	CI	ear					
Odor:	None	Low	Medium	High	Very Strong	H2S	Fuel-like	Mone	 ·	
Notes:							•		-	
					<del>-</del>	•	-		 	
				all		4				
Signed	/Sample	r(s):	1 Li		$(\cdot, w)$	Wi	$\gamma$			
Signed	/Sample	r(s):	11		C.Wi	Wi	η			

Well No.: BGSMW06	Location: NAS Fort Worth JRB
Sampler(s): S. Stunford, C. Williams	Project Name: AOC 1
Well Depth: 16.88'	Project #: AFC001-16BBD Date: 4-12-00 Time: 1238
DTW (ft): 11. 3' DTP (ft): —	Courier: FedEx UPS Hand Other
MP Ht. Above/Below Ground Surface: -0.48	Sampling Method: Low Flow
Condition of Bottom of Well: Good	Type of Pump: Bladder
Screen Interval (ft): 6.92 - 16 92	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):
Well Diameter (in):	Misty/Drizzle Rain, 60°
Placement of Pump (ft): (top): 11.0'	1

## **Field Parameters**

Time Depth to Flow Total pH Temp Cond ORP DO Turb Type, Size, and Amount (C) ((iii)) ((iiii)) ((iiiiiiiiiiiiiiii
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
1244     11.25     0.1     0.6     6.95     20.90     366     20.0     2.30     /0.98       1247     11.25     0.1     0.9     6.97     20.89     367     14.5     2.24     9.88       1250     11.25     0.1     1.2     6.98     20.82     367     9.0     2.36     9.57       1253     11.25     0.1     1.5     6.99     20.68     366     1.1     2.49     9.65       1256     11.25     0.15     1.95     7.01     21.13     368     -13.8     2.72     10.03       1259     11.25     0.15     2.40     7.04     21.54     372     -29.0     3.40     10.20       1302     11.25     0.15     2.85     7.09     21.56     372     -44.2     3.82     /0.2
1244 11.25 0.1 0.6 6.95 20.90 366 20.0 2.30 10.98 1247 11.25 0.1 0.9 6.97 20.89 367 14.5 2.24 9.88 1250 11.25 0.1 1.2 6.98 20.82 367 9.0 2.36 9.57 1253 11.25 0.1 1.5 6.99 20.68 366 1.1 2.49 9.65 1256 11.25 0.15 1.95 7.01 21.13 368 -13.8 2.72 10.03 1259 11.25 0.15 2.40 7.04 21.54 372 -29.0 3.40 10.20 1302 11.25 0.15 2.85 7.09 21.56 372 -44.2 3.82 10.2
1250 11.25     0.1     1.2     6.98     20.82     367     9.0     2.36     9.57       1253 11.25     0.1     1.5     6.99     20.68     366     1.1     2.49     9.65       1256 11.25     0.15     1.95     7.01     21.13     368     -13.8     2.72     10.03       1259 11.25     0.15     2.40     7.04     21.54     372     -29.0     3.40     10.20       1302 11.25     0.15     2.85     7.09     21.56     372     -44.2     3.82     70.2
1253 11.25 0.1 1.5 6.99 20.68 366 1.1 2.49 9.65 1256 11.25 0.15 1.95 7.01 21.13 368 -13.8 2.72 10.03 1259 11.25 0.15 2.40 7.04 21.54 372 -29.0 3.40 10.20 1302 11.25 0.15 2.85 7.09 21.56 372 -44.2 3.82 10.2
1256 11.25 0.15 1.95 7.01 21.13 368 -13.8 2.72 10.03 1259 11.25 0.15 2.40 7.04 21.54 372 -29.0 3.40 10.20 1302 11.25 0.15 2.85 7.09 21.56 372 -44.2 3.82 /0.2
1256 11.25 0.15 1.95 7.01 21.13 368 -13.8 2.72 10.03 1259 11.25 0.15 2.40 7.04 21.54 372 -29.0 3.40 10.20 1302 11.25 0.15 2.85 7.09 21.56 372 -44.2 3.82 10.2
1302 11.25 0.15 2.85 7.09 21.56 372 -442 3.82 10.2
1305 11.25 0.15 3.30 7.13 21.62 372 -66.8 4.00 10.1
1308 11.25 0.15 3.75 7.23 14:69 373 -89.0 4.83 10.0
1314 11.25 0.15 4.20 7.21 21.58 373 -91.3 4.53 9.79
1317 11.34 0.15 4.65 7.21 21.60 373 -95.9 4.56 9.23
1320 11.34 0.15 5.10 7.21 21.62 373 -998 4.59 8.92
1325 Collect samples.

_	Clear Other (		U	ear				
Odor:	None Low	Medium	High	Very Strong	H2S	Fuel-like	Mono.	 _
Notes:		_						
		_			_			
		<u> </u>				1/		
Signed/	Sampler(s):	<u>' Wil</u>	127	$\frac{1}{2}$	SA			
	•				//	,		 -

GROUNDWATER FIELD SAMPLING DATA SHEET ruge (of Well No.: NAS Fort Worth JRB WHGLTA028-036 Location: AOC 1 ampler(s): Project Name: M.Williams J. Wallace Well Depth: AFC001-16BBD Project #: Date: 5/16/00 Time: 1342 DTW (ft): / DTP (ft): Courier: FedEx Hand Other **UPS** MP Ht. Above/Below Ground Surface: Sampling Method: Condition of Bottom of Well: acud Type of Pump: BLADDER Screen Interval (ft): Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Dartly Sunny, wind from S, 85° Well Diameter (in): Placement of Pump (ft): **Field Parameters** Temp. Cond ORP DO (C) (umhos/cm) (my) (mg/L) Cond. Total & Time: Depth to Flow Turb Type, Size, and Amount Temp. Waters Rates Volume (NTU) of Sediment Discharged (L) 494 23 55 -103.1 0.91 0.91103,9 104,9 0.98 24 44 **Observations** Colory Clear Other (describe): CLECK None Low Medium High H2S Fuel-like Odor: Very Strong non-Notes:

|Signed/Sampler(s):

Milala

Well No WHGLTA028- 036	Location:	Location: NAS Fort Worth JRB								
Gampler(s): 1. Williams, J. Wallace	Project Na	Project Name: AOC 1								
Vell Depth: 23.35	Project #:	AECONA AE								
OTW (ft): 11 141 DTP (ft):	Courier:	FedEx	UPS	Hand	Othe	- 1	Time: 1342			
MP Ht. Above/Below Ground Surface		Sampling Method: GRAB								
Condition of Bottom of Well:		Type of Pump: Blacker								
Screen Interval (ft): 4-24'		un/clear, ove			ection am	hiant tam				
Vell Diameter (in):	<del></del>	Sunny					perature).			
Placement of Pump (ft) with 171		2-111	, -	,,,,,,	~ ) · · ·	,				
- o+ fump) IT.I		<del></del>					_			
		Paramete		has	<del>_</del>					
Time Depth to Flow Total Water Rate Volume	OH Temp						ze, and Amoun neut Discharged			
(f) - (L/m) (L)			<b>汽车</b>	數學家	<b>的</b> 基本实		"是"			
1437 11.48 2.05 4.50 C	87 25.31	V35 ~	103.2	0.74	15 44					
1440 7.45 0.05 4.65 6	.88 26.25	646 -	105.1	0.79	14.65					
1443 11.42 C. (5 4.80 6	90 26.7E	654 -	1170	C.E 7	14,20					
1446 11.41 0.65 4.95 6	£9 26.83	455	167.1	0.84	15.22	<u> </u>				
1449 1.46 0.65 5.10 2	91 26.98	6.56=-	1078	0.94	14.32					
1452 11.40 C. C5 5.25 i	88 27.CT	658-	167.6	0,92	14.10					
4 55 11.39 6.65 5.40 6.	89 27.19	659 -	1677	0.84	13.86					
1458 1.37 0.05 5.55 6	91 27.42	662 -	1CE, 1	0.95	13.77					
1561 1.1.36 2.05 5.70 6	92 27.71	667-	109.0	0.95	13.69					
	.90 27.86			0.88		<del>,</del>				
156711.34 0.05 6.00 6	91 27.93	670 -	109.5	0,88	12.54					
1510 11.34 0.05 6.15 6	.89 36 OG	1672	+ 109.9	0.89	12.94	<u> </u>				
1511 collect samples		<u> </u>	<u> </u>							
/										
		<u> </u>			<u> </u>	<u> </u>				
		<u> </u>		<u> </u>		}				
<i></i>	Ob	servations	3							
Color: Clear Other (describe): (1)					<u> </u>					
Odor: None, Low Medium High	Very Strong F	12S Fuel-l	ıke "	عربر <i>ن</i>						
Notes:				<u> </u>						
		_								
				_						
	<u></u>		_							
Signed/Sampler(s):			7.11	/						

GROUNDWATER FIELD SAMPLING DATA SHEET Well No.: WHGLTA 029 0 37 NAS Fort Worth JRB Location: Sampler(s): AOC 1 Wallace, C. William Project Name: Well Depth: AFC001-16BBD Date: 5-16-00 Time: 0938 Project #: DTW (ft): 15.42' DTP (ft): \_ Courier: 1/FedEx Other UPS Hand Grab; 10wflow purgina MP Ht. Above/Below Ground Surface: Sampling Method : Plan Condition of Bottom of Well: Good Type of Pump: Bladder Screen Interval (ft): 16'-26.5' Weather (sun/clear, overcast/rain, wind direction, ambient temperature): Cullast, Sto, wind from South Well Diameter (in): 4" Placement of Pump (ft): (60+10) **Field Parameters** 

Time	Depth to	Flow	Total	pH	Temp :	Cond.	ORP.	製od製	Turb	Type, Size, and Amount of Sediment Discharged	.]
Tine	Water (ft)	Rate (L/m)	Total Volume (L)	pH	(E)(O) (E)	Cond. (umhos/cm)	(my)强 水流流	(mg/L);	(NTU):	of Sediment Discharged	<b> </b>
0938	16.04	0.2	UU	6.66	218+	547	-657	4191	4191	Clear	]
(943	16.11	6.2	10	6.66	21.48	543	4.7.3	474	47.9	(DO 32 22 mg/L	])
0946	1615	0.2	16	6.67	21.39	543	-66 L	31.0	4× (-		]
0949	16-18	0.2	2.4	6.66	21.34	543	-670	29.40	48/		
0451	16.14	0.1	<b>3</b> .0	668	21 88	551	-688	31 49	44.5		
0954	16-14	0.1	33	667	22.27	556	-674	28 94	43.9		
0957	16 19	0.1	36	6.69	22 21	555	-667	29 12	43.3		
1000	1612		39	6.67	22 41	557	-65.5	25.97	42.7	<u> </u>	
1005	16.15	0.05	4.1	669	22.27	556	-634	24 72	39 5	<u></u>	
1010	16.14	Oi	44	670°	22 22	556	-62.5	21 93	<u> 35 6</u>		
1015	16.15	0.1	47	6.70	22 15	555	-622	2105	35.5		
1020	16.17	0.1	5.0	6.69	22 30	<del></del>	-623	17.09	36.2	DO MENTEGORE DE CHE-WELL CHE WILL IS SEMPI	18201
1025	16 17	0.1	5.3	6.68	22 13	556	-62.4	15.38	36.1	Well is sampi	44
1030	16.22	0.1	5.6	6.68	21 25	545	-61.9	13.59	34.0		
1035	16.15	C · 1	5.9	6.69	22 88	567	-62.6	11.60	34-4		]
1040	16-10	C.	(2	6.68	23.5(	575	-62.7	951	33.3	<del></del>	_

	Clear Other (		MABL			
Odor:	None Low	Medium	High Very Strong	H2S	Fuel-like 1201	
Notes:	DC m	217 (N	inc not 1	unc	tioning properly	
	11	sill k	L Achtac	(1		
<u></u>			·			
Signed	/Sampler(s):	[' ]i	allinto.		Allall .	
			——————————————————————————————————————	<u>-</u>		

Weil No.: WHGLTA028	037	-	Location:	NAS F	ort Wortn .	IRB		J.		
Sampler(s): J. Wallau		<del></del>	Project Na	me: AOC 1						
Weil Depth: 22.3'	7		Project #: AFC001-16BBD Date: 5-/6-00 Time: 0938							
DTW (fi). 15.92 DTP	-	Courier: FedEx UPS Hand Other								
MP Ht. Above/Below Ground			Sampling N	Aethod:	rah:	lon	Home	- Constitution of		
Condition of Bottom of Well:	1	Type of Pump: Bladd / Bladd /								
Screen Interval (ft):	2.5	Weather (s	un/clear, ove	ercast/rair	n, wınd dir	ection, am	bient temperature):			
Well Diameter (in):		Overc	c S+,	800,	wind	1 fierr	South			
Placement of Pump (ft): h. #2	mod 1	9,7								
<u> </u>	•		Field	Paramete	rs					
Time Depth to Flow Rate (ft) (L/m)	Total Volume (L)	pH	Temp. (C)	Cond. (umhos/cm)	ORP:	DO (mg/L)	Turbe (NTU)	Type, Size, and Amoun of Sediment Discharged		
1045 16.10 0.1	6.5	6.66	23,84	579	-1-2.7	789	32.2	2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3		
1050 16.10 0.1	6,8	6.69	2326	571		6.92	31.6			
1055 16.12 0.1	7.1	6.67	22 53	566	-17.5		30.6			
1100 101/417	Samo	100				1				
				li .						
			!							
					<u> </u>		<u> </u>			
							<u> </u>			
	<u> </u>		1		]	<u> </u> 	<u> </u>			
						_	<u> </u>	<u> </u>		
					<u>'</u>	<u>.                                    </u>				
			<del> </del>		<u> </u>					
			Obe	ervations			<u> </u>			
Colory Clear Other (describ		<u> </u>		——————	<u> </u>					
Odor: None Low Medi	<u>``.^</u>	<i>ÛĈG/</i> Very S	Strong U	2S Fuel-lil	/A -					
Notes:		. YOLY 3	outung fi			onl	<del></del>			
							<u> </u>			
							<del></del>			

GROUNDWAT	TER FIELD SAMPLING DATA SHEET	L 033 1
Well No.: MW-5	Location:	NAS Fort Worth JRB
Jampler(s): K. Duran, J. Wallau	Project Name: AO	C 1 Groundwater Sampling
Well Depth: 9.47	Project #. AFC001 16BBD Date	11/2/00 Time: 0923
DTW (ft): 3.55 DTP (ft)	Courier. X FedEx UPS Hand	Other
MP Ht Above/Below Ground Surface 1.58	Sampling Method: LOW FLOW	
Condition of Bottom of Well Firm	Type of Pump: BLADDEK	
Screen Interval (ft): 35 - 11 0	Weather (sun/clear, overcast/rain, wind direction	n, ambient temperature)
Well Diameter (in).	sunny, w, 75°	•
Placement of Pump (ft) (789) 3		
	Field Parameters	

Time	Depth to:	Flow	- Total	i a pH <sub>sè</sub>	Temp.	Cond.	ORP	€_DO <sub>≠</sub> to	Turb.	Type, Size, and Amount
	Depth to Water (ft)	Rate	Total Volume (L)	apH .	Temp.	Cond.	(mv)	(mg/L)	Turb.	of Sediment Discharged
	3.65	0.15	0	8.15	2249	295	-109.4	1.46	9.12	, '
0925	3,65	0.15	0.45	8.14	22.50	1 -	-112.2	1.20	8.56	
	3.65	0.15	0.90	8.14	22,58		-113.5	1.12	9.10	
	3.66	0.15	1.35	8.12	22.40	293	-115.b		7 -	
		0.15		8.13	22.41	<b>a9a</b>	-118,3			
L .	3.49	_	2.25	8.12	22.52		-120.8		9.73	
	3.65		2.55	8.10	22.89		-120.1	0.72	9.46	
	3.63		2.85	8.10	23.08		-116.4	0.75	9.21	
0948	co	Vect	sam	oles						
						_				
<u> </u>						_				
<u> </u>										
	<del>  </del>	_			<u> </u>	<u> </u>				
	<u> </u>					<u> </u>	_			
	ļ			_	<del> </del>	<u> </u>				
	<u> </u>						<u> </u>			

Color: Clear Other (describe).	Slightly yellow tint High Very Strong H2S Fuel-like	
Odor. None Low Medium	High Very Strong H2S Fuel-like	none
Notes:	<del></del>	
	<del>-</del>	
Signed/Sampler(s):	Holl-	Kath

#### GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: MW-10	Location:		NAS Fort	Worth JRB
Sampler(s). K. Duran, J. Wallac	Project Name:		AOC 1 Groundwal	ter Sampling
Well Depth: 33.00	Project #:	AFC001 16BBD	Date: 11/1/00	Time: 0941
DTW (ft): /6.99 DTP (ft)	Courier: K FedEx	UPS Hand	Other	
MP Ht. Above/Below Ground Surface -0 6	8 Sampling Method:	LOW FLOW		
Condition of Bottom of Well Soft	Type of Pump: 🙎	LADDER		
Screen Interval (ft): 11.32 ~ 31.32'	Weather (sun/clear, ov	ercast/rain, wind di	rection, ambient te	mperature):
Well Diameter (in) 4	overcast,	S , 72°F		
Placement of Pump (ft). (70P) 22.00				

#### Field Parameters

Time	Depth to	Flow	Total (	pH	Temp.	Cond.	ORP,	DO.	Turb.	Type, Size, and Amount of Sediment Discharged
· 基本公	Depth to Water (ft)	Rate (L/m)	volume (L)	pH		Cond. (umhos/cm)	(mv)	DO (mg/L)	((10))	of Sediment Discharged
0941	17.07	0.1	0	7.73	22.57		-98.7	2.50	7.2	
0944	17.11	0.1	0.3	7.61	22.44	914	-99.3	1.99	4.4	
0947	17.14	0.1	0.6	7.49	22.36	913	-99.5	1.58	3.5	
0950	17.15	0.1	0.9	7.45	22.37	914	-99.6	1.48	3.5	
0953	17.17	0.1	1.20	7.44	22.33	913	-99.9	1.35	2.8	
0956	17.18	0.1	1.50	7.44	<b>ಎ</b> ೩.ಎട	912	-99.7	1.24	3.5	
0959	17.22	0.1	1.80	7.42	22.25	912	-99.9	1.18	4.2	
1002	17.18	0.1	a.10	7.43	<u> </u>	916	-99.7	1.14	3.1	
1005	Co	lect	Sam	oles		_				
	_									
					_					
								,		

Odor	None	Low	describe) Medium	High	Very Strong	H2S	Fuel-like low hydrocarbon	
Notes:		_				_		
_								
	_							
 igned.	/Sample	r(s):		1.)0.0	70		Kes Dua	

Well No.: SAV-2	Location	NAS Fort Worth JRB
Sampler(s): K. Duran, J. Walla	Project Name	AOC 1 Groundwater Sampling
Well Depth: 18.74	Project #: AFC001 16BBI	Date: 11/100 Time: 1057
DTW (ft): 15.05 DTP (ft) —	Courier: * FedEx UPS Har	dOther
MP Ht. Above/Below Ground Surface1	5 Sampling Method: Low FLOW	·
Condition of Bottom of Well	Type of Pump: BLADDER	
Screen Interval (ft): 5 85 - 18.35'	Weather (sun/clear, overcast/rain, wind o	
Well Diameter (in):	overcast, 5, 75	o (=
Placement of Pump (ft). (DP) 13.90		

#### Field Parameters

Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume	pH	Temp. (C)	Cond. (umhos/cm)	ORP (mv)	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
1057	15.07	0.1	0	7.41	25.28	809	-98.5	2.44	8.80	
1100	15.06	0.1	0.3	7.36	25.32	810	-98.0	2.41	8.51	
1103	15.06	0.1	0.6	7.29	25.33	812	-95.8	2.10	8.0	
1106	15.07	0.1	0.9	7.27	25.33	814	-95.7	1.94	7.8	
1109	15.07	0.1	1.2	7.26	2537	816	-96.1	1.66	7.1	
1112	15.07	0.1	1.5	7.24	25.36	818	-96.6	1.50	6.3	
1115	15.06	0.1	1.8	7.24	25.39	819	97.2	1.42	5.8	
1118	1506	0.1	2.1	7.24	25.36	819	97.4	1.35	6.0	
1121	15.07	0.1	2.4	7.24	25.28	817	97.6	1.31	5.5	
1/23	Co	lect	sai	nole	<u> </u>		<u> </u>			
				′						
							<u></u>			
								<u> </u>		

Color:	Clear	Other (	(describe).	U	lac	_				
Odor.	None	Low	Medium	High	Very Strong	H2S	Fuel-like	veru	Strona	hydrocarbon
Notes:				-				-	J	J
			_				_			
						_				
	-									
Signed	/Sample	er(s):	a	Wall	are	_	Ker D	m_		

## 635 74 GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: BGSMW03	Location:	NAS Fort Worth JRB
Sampler(s): K.Duran, J. Wallau	Project Name:	AOC 1 Groundwater Sampling
Well Depth: 20.55	Project #.	AFC001 16BBD Date: 11/1/00 Time: 1416
DTW (ft) 1.72 DTP (ft):	Courier: 🗶 FedEx	UPS Hand Other
MP Ht. Above/Below Ground Surface0 44	Sampling Method:	OW FLOW
Condition of Bottom of Well 80ft	Type of Pump: 3	LADDER
Screen Interval (ft) 10.06 - 20.06	Weather (sun/clear, ov	ercast/rain, wind direction, ambient temperature):
Well Diameter (in): 4	RAIN, 5	w, 69°
Placement of Pump (ft) (TOP) 13.13		

#### Field Parameters

7										
Time	Depth to Water (ft)	Flow Rate (L/m)	Total Volume (L)	₹ <b>pH</b>	Temp.	Cond. : (umhos/cm)	ORP (mv)	DO (mg/L)		Type, Size, and Amount of Sediment Discharged
1416	11.75	0.4	0	8.10	24.40	821	-1014	<i>a</i> .a2	4.9	
1419	11.80	0.4	1.2	7.68	24.77	834	-102-1	1.03	3.2	
1422		0.2	2.4	_	24.35		-103.9	0.97	2.4	
	11.75	0.2	3.0	7.47	24.49		-103.9		2.3	
1428		0.2	3.6		24.48	1	103.3	0.95		
1431	11.76	0.2	4.2	7.41	24.29		103.6		2.3	
1434			4.8	7.39	24.04		103.2		2-1	
1437		0.2	5.4	7.39	23,60	826	-102. b	0.85		
144		ollect	Sa	mple	<u></u>					
			_	7						
						_				
							_			

Notes:	Odor:	None	Low	Medium	High	Very Strong	H2S	Fuel-like	low	hydrocarbon
	Notes:				_	-				
				-		•				
									·	
								_		

#### GROUNDWATER FIELD SAMPLING DATA SHEET

No · BGSMW05	Location ·	NAS Fort Worth JRB
pler(s) K. Dyran, J. Wallau	Project Name:	AOC 1 Groundwater Sampling
ell Depth: 12.52	Project #: AFC001 16BBE	Date: 11/2/00 Time: 0754
)TW (ft): 6.88 DTP (ft): -	Courier. Y FedEx UPS Hand	_
MP Ht Above/Below Ground Surface0.3	2 Sampling Method . Low FLow	
Condition of Bottom of Well: from	Type of Pump BLADDER	
Screen Interval (ft): 7.28 - 12.18	Weather (sun/clear, overcast/rain, wind d	irection, ambient temperature):
Well Diameter (in). 4	sunny, w, 68°	
Placement of Pump (ft).	′	

#### **Field Parameters**

		Depth to Water (ft)	Flow (L/m)	Total "Volume" (L)	pH	Temp. (C)	Cond. (umhos/cm)	ORP	DO (mg/L)	Turb. (NTU)	Type, Size, and Amount of Sediment Discharged
	0754	6.94	0,2	0	7.52	24.95	758	212.5		ಎ.∞	
	0757	6.93	0.2	0.6	7.50	25.39	766	205.5		<i>⊋.0</i> 0	
į	0800	6.89	0.15	<i>1</i> . a	7.50	24.66	752	194.8	0.79	1.38	
Į	0803	6.89	0.15	1.65	7.50	a4.11	742	191.9	0.82	1.72	
ļ	0806	6.89	0.15	2.10	7.51	<u> ۲3.۱۲</u>	729	187.4	0.80	1,30	
	2009	6.90	0.20	2.55	7.50	23.40	736	180.9	0.84	1.17	
	0812	6.90	0.20	3.15	7.50	24.28	746	173.2	0.82	2.70	
	0015	6.90	0.10	3,75	7.49	25.19	752	169.0	0.75	3,50	
	0818	6.90	0,10	4.05	7.50	24.69	750	164.4	0.76	1.27	
Í	0821	6.90	0.10	4.35	7.51	23.61	732	161.4	0.83	1.09	
}	0824	6.90	0.10	4.65	7.52	22.90	721	159.4	0.87	1.33	
	0827	6.90	0.10	4.95	7.53	<b>a</b> a. <i>05</i>	705	158.1	0.91	1.34	
Ì	0830	6.90	0.10	5,25	7.54	21,63	702	155.2	0,97	1.05	
	0832	00/1	eet	samp	les		 				
									<u> </u>		

		Other (	describe):	C	ear_			<del></del>	
Odor.	None	Low	Medium	High	Very Strong	H2S	Fuel-like	none	
Notes	:								 
			,						
<u> </u>									
L									 
Signed	1/Sampl	er(s)		Wa	l/		Kart	Din-	

## 635 76 GROUNDWATER FIELD SAMPLING DATA SHEET

Page 1 of 3

Well No. BGSMW06	Location. NAS Fort Worth JRB
Sampler(s): K. Duran, J. Wallau	Project Name: AOC 1 Groundwater Sampling
Well Depth: 16.95	Project #: AFC001 16BBD Date: 11/1/00 Time: /529
DTW (ft) 11.57 DTP (ft):	Courier: X FedEx UPS Hand Other
MP Ht. Above/Below Ground Surface0.48	Sampling Method: LOW FLOW
Condition of Bottom of Well - Firm	Type of Pump. BLADDER
Screen Interval (ft) 6.92 -16.92	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in). 4	overcast, rainy, S, 75°
Placement of Pump (ft): fop //.77	·

#### Field Parameters

Time =	Depth to	Flow	Total	₄∶ pH ∴	Temp.	Cond.	ORP	∄ DO.	Turb.	Type, Size, and Amount
	Water	Rate (L/m)	Volume		(C)	(umhos/cm)	(mv)	(mg/L)	(NTU)	of Sediment Discharged
	(ft) (				24/4/	r	<del>,                                    </del>	130		
1529		0.15	0	7.82	24.61		~72.5	1.70	31.6	
1532	11.61	0.25	0.75	7.77	24.84	651	-748	1.43	32.2	
1535	11.62	0.2	1.50	7.72	25.14	655	-76.2	1.17	31.5	
1538	11.66	0.2	2-10	7.69	a5.54	661	-77.1	0.92	30.7	
1541	11.68	0.2	a.40	7.68	25.49	659	-78.2	0.84	29.6	
1544	11.63	0.2	3.00	7.68	25.30	658	-807	0.91	28.3	
1547	11-61	0.15	3.60	7.67	25.12	658	-୧၁.၁			
1550	11.60	0.15	4.05	7.67	24,87	654	-83.0	0.98	26.4	
1553	11.40	0.15	4.50	7.67	24.68	653	-87.6	1.04	24.6	
1556	11.61	0.15	4.95	7.68	24.69	653	-90.3	1.04	23.0	
1559	11.61	0.15	5.40	7.68	24.70	653	-92.1	1.04	22.6	
1602	11.61	0.15	5.85	7.67	25.26	653	-95.5	1.04	21.5	
1605	11.61	0.15	1	7.68	_	1 4	-96.6	1.06	22.4	<u> </u>
1608	11.64	0.15	6.75		25.72		-96.5	1.08	21.9	
	11.61	0.15	7.20		25.47		98.0	1.10	21.4	
1614	11.61	0.15	7.65	7.67		T .	-98.2	1.16	20.2	

			$\mathcal{C}$	loudy					
None	Low	Medium	High	Very Strong	H2S	Fuel-like	none		
		,					-		
		-							
					_				
	-								
1/Sampler(	s):	Alu	all_			Kent	Dune		
	None	None Low	None Low Medium	None Low Medium High	None Low Medium High Very Strong	None Low Medium High Very Strong H2S		None Low Medium High Very Strong H2S Fuel-like None	None Low Medium High Very Strong H2S Fuel-like None

# GROUNDWATER FIELD SAMPLING DATA SHEET 77 Page 2 of 3

Well No - WHETAOID BGMO6	Location: NAS Fort Worth JRB, Texas
e-impler(s) K. Duran, J. Wallau	Project Name October 2000 Quarterly Sampling
Depth 16.95	Project #. AFC001-1600 1680 Date: // 1/00 Time: /529
DIV (ft) 11.57 DIP (ft) —	Courier: * FedEx UPS Hand Other
MP Ht Above/Below Ground Surface	Sampling Method . LOW FLOW
Condition of Bottom of Well Firm	Type of Pump: 3LADDER
Screen Interval (ft): 12-11 14-23-11 16.92-	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in)	OVERCAST, RAIN, S, 75°
Placement of Pump (ft) 11.77	

#### **Field Parameters**

Ťiinė,	Depth to	Flow	Total 👍 Volume	A pH	Temp.	Cond	ORP	DO)	Turb	Type Size and Amount of Sediment Discharged
	Walers (ft)	Rate (L/m)	Volume (L)	BH ALL	(C) /	Cond (unihos/cm)	(mv)	, DO (aig/L)	Turb in its to i	of Sediment Discharged
1617	11.61	0.15	8.10	7.69	24.89	660	-/03.2	1.17	18.46	24
1620	11.61	0.2	8.55	7.68	25-05	665	-105.1	1.21	17.07	
1623	11-61	6.2	9.15	7.68	25.10	669	-105.5	1.32	18.01	
1624	11.61	0.2	9.75	7.68	25.12	670	-104.8	1.39	16.56	
1629	11-61	0.2	10.35	7.68	25.25	674	-104.4	1.42	16.29	
1/132	11.63	0.2	10.95	7.68	25.34	676	-104.4	1.45	16.16	
35	11-63	0.2	11.55	7.67	25.35	677	-1052	1.47	15.24	
1638	11.63	0.2	72.05			677	-106.4	1.48	15.40	
1641	11.63	0.2	12.75	7.68	25.40	678	-107.4	1.48	14.98	
1644	11.63	0.2	13.35	7.68	25.17	675	108.5	1.51	13.92	
1647	11.61	0.2	13.95	7.69	25.11	674	108.1	1.52	13.79	
1650	11.60	0.2	14.55	7.69	25-08	676	-109.5	1.57	13.98	
1653	11.60	0.2	15.15	7.69	25.07	676	-110.1	1.63	12:37	
1656	11.60	0.2	15.75	7.69	25.00	675	-110.0	1.68	//.92	
1659	11.60	0.2	16.35	7.68			-109.8	1.72	11.66	
1702	//.57	0.2	16.95		24.83	I	-109.6	1.76	11.39	<u>j</u>

olor:	Clear	Other (	describe)	Cle	lar				<u></u> -
dor	Mone)	l ow	Medium	High	Very Strong	1128	Fuel like	none	
nics					,				
				.,					
<b>!</b>									
			·						
igned.	/Samplei	(5)	i	$\Box u l$	all_		Ke	+Dun	

Page 3 of 3

Well No: WHETHOW BOSMWOU	Location NAS Fort Worth JRB, Texas
Sampler(s) K. Duran, J. Wallace	Project Name October 2000 Quarterly Sampling
Well Depth 16.95	Project # AFC001-10000 (6BBD Date: 11/1/00 Time. 1529
DTW (0) 11.57 DIP (0) -	Courier: X FedEx UPS Hand Other
MP Ht Above/Below Ground Surface	Sampling Method LOW FLOW
Condition of Bottom of Well firm	Type of Pump: BLADDER
Screen Interval (ft): 13-11 4.92-	Weather (sun/clear, overcast/rain, wind direction, ambient temperature)
Well Diameter (in).	OVERCAST, RAIN, S, 75°
Placement of Pump (ft) //.77	

#### Field Parameters

Time	Depih lö Water (ft)	Flow Rate (L/m)	Total Volume (L)	等 <b>PH</b> -A-	Temp.	Cond. (umhos/cm)	ORP (mv)	(mg/L).	Tuit (NTÜ).	Type Size, and Amount of Sediment Discharged
1705	11.57	0.2	17.55				-109.6		_	
1708	11.57		18.15				-110.1	1.75	11.56	
17-11	11.57	0.2	18.75	7.68	24.75	673	-//1.2	1.79	11.48	
1714	11.57	0.2	19.35	7.68	24.77			1.84		,
1717	11.57	0.2	19.95	7.67	24.88	678	-109.4	1.91	11.70	
1720	11.57	0.2	20.55	7.67	25.20	682	-109,2		11.23	
1723	11.59	0.2	21.15	7.67	25.46	686	-1099	1.95	11.53	
1726	Coll	ect s	ampl	es				 		
1729	-9W		·					'		
	,							<u> </u>		
	<u></u>									
				_						
			1						]	
	]									

Color (	Clear	Other (	describe).	clea	2/				
Odor	None	Low	Medium	High	Very Strong	1125	Fuel-like	none	
Notes.								<u> </u>	
									<del></del> _
Righted	l/Sample	1(5)		Ju	all	_		Ket Dun	

GROUNDWAT	TER FIELD SAMPLING DATA SHEET 635 79				
Well No. WHGLTA036	Location: NAS Fort Worth JRB, Texas				
Sampler(s): K. Duran	Project Name: October 2000 Quarterly Sampling				
Vell Depth: 2-3.35-	Project #: AFC001-16BBD Date: ///2/2. Time. 1/3.				
DTW (ft): 13.31 DTP (ft).	Courier FedEx UPS Hand Other				
MP Ht Above/Below Ground Surface: -0.5	Sampling Method:				
Condition of Bottom of Well:	Type of Pump. BP				
Screen Interval (ft):	Weather (Sun/Dlear, overcast/rain, wind direction, ambient temperature).				
Well Diameter (in): 4	ω 75°E				
Placement of Pump (ft): 14.83 (400)					
	Field Parameters				
Time Depth to Flow Total pH Water Rate Volume (ft) (L/m) (L)	(C) (umhos/cm) (my) (mg/L) (NTU) of Sediment Discharged				
1130 13.46 1125 0 6.7					
1133 13.59 .125 .375 6.7					

## 136 13.70 125 .75 6.7 23.8 1088 -165 1.33 2.3 1139 13.74 .125 2025 6.7 24.3 1096 -170 1.24 2.1 1142 13.80 -125 2.4 6-7 24.5 1100 -170 1-28 42 1145 13.80 .125 2.745 6.8 24.3 1100 -174 1.20 4.1 -174 1.06 3.7 29-1 1096 .125 3.15 6.8 -176 1.02 2.4 1151 13.63 .125 3.525 6.4 24.3 /097 1154 13.84 .125 3.9 6.9 24.3 1097 -176 0.99 3.3 -179 1.01 24.3 /099 3.2 1157 13.84 125 4.275 6.9 END Collection parameter

	Clear Other (			ar				
Odor:	None Low	Medium	High	Very Strong	H2S	Fuel-like	none	
Notes:	<del></del>							
_								
		<u>-</u>						
Signed	l/Sampler(s):	K	+7					
Signed	l/Sampler(s):	Ke	<del>1</del> 0,					

## GROUNDWATER FIELD SAMPLING DATA SHEET

Well No.: WHGLTA037	Location NAS Fort Worth JRB, Texas			
Sampler(s): J. Wallaw	Project Name October 2000 Quarterly Sampling			
Well Depth: 23.20	Project # AFC001-16BBD Date. [ 2 00 Time 1053			
DTW (fi): /6.01 DTP (fi):	Courter: X FedEx UPS Hand Other			
MP Ht. Above/Below Ground Surface -0.3	Sampling Method: Low FLOW			
Condition of Bottom of Well firm	Type of Pump. RLADDER			
Screen Interval (ft):	Weather (sun/clear, overcast/rain, wind direction, ambient temperature):			
Well Diameter (in) 4	sunny, w, 75°			
Placement of Pump (ft): (60P) 16.5				

#### Field Parameters

- 10 FG 54 34		* _ *rm *faces n >	1 0 10 20 20 20 20 20 20 20 20 20 20 20 20 20	. v. 3.4%. 2	~~	A - a - mu 1	10 40 - 1	\ - • 4b		1960
Time	Depth to	Flow	Total	₹ <b>pH</b>	Temp.	Cond.	ORP	DO	Turb.	Type, Size, and Amount
10.00	Water	Rate	Volume	44.4	蒙(C)要	(umhos/cm)	(mv).	(mg/L) •	(NTU)	of Sediment Discharged
为为强处	(ft)#	(L/m)	至(L) 单	THE PERSON	學主要	が変数を				
1053	18.00	0.1	0	7.37	23,83		-110.2		5.12	
1056	18.02	0.1	0.3	7.32	23,83	แนว	-110.7	1.69	5.41	
1059	18.04	7.1	0.6	7.30	23.95	1150	-110.9	1.49	5.02	
1102	18.06	0.1	0.9	7,30	24.00	1152	11110	1.47	4.62	
1105	18.09	0.1	1.2	7.29	23.97	1152	-111.2	1.33	2.73	
1108	18.09	0.1	1.5	7.30	23.82	1150	111.2	1.30	2.59	
1111	18.09	0.1	1.8	7.30	23.78	1147	-111.6	1.17	2.43	
1114	18.10	0.1	2.1	7.30	23.85	1150	111.7	1,15	3.11	
1117	18.13	0.1	2.4	7.30	23.65	1145 -	111-0	113	2.23	
1120	coll	ect	Same	des						
			,			_				
					l l					
								_		
				-					-	
		<u> </u>	<u> </u>	L	<u> </u>					<del></del>

Color:	Clear	Other (	(describe).	Cl	lear				
Odor:	None	Low	Medium		Very Strong	H2S	Fuel-like	none	
Notes:									$\neg$
							-		
<u></u>								-	
				<del>/4-1-</del>	11			·	
Signed	/Sample	er(s).		_/Wa			<u> </u>	+Dun-	 

# APPENDIX A.2 FIELD SAMPLING DATA REPORTS



		<del></del>
LOCATION: NAS Fort Worth JRB	PROJECT NAME AOC	1
SITE 40C 1	PROJECT NAME. AFC	001-16BBD
	MPLE INFORMATION	
SAMPLE ID WWW-HWGOT DUPOS	DATE: 4.17.00	TIME: 0427 (1200)
MATRIX TYPE: WG	ENTER SAMPLE NUM	MBERS FOR QC SAMPLES/
SAMPLING METHOD: Lowflow	<del></del>	D WITH THIS SAMPLE:
LOT CONTROL #: O 1 1 A	MATRIX SPIKE (MS)	
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP	(SD)
CHAIN-OF-CUSTODY #:	FIELD DUP (FD)	t wm-11me//
	AMBIENT BLANK (A	B)
SAMPLE BEG DEPTH (FT)	EQUIPMENT BLANK	(EB) _ {
SAMPLE END DEPTH (FT). NIA	TRIP BLANK (TB)	13041700
GRAB ( COMPOSITE ( )		
CONTAINER PRESERVATIVE/	ANALYTICAL	ANALYSIS
SIZE/TYPE # PREPARATION	метнор	
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B	VOCs
- Nor	A DE COCEDIA TIONS	
	ABLE OBSERVATIONS	MISCELLANEOUS
	MPLE CHARACTERISTICS	MISCELLAREOUS
2nd Oppm COLOR CLEAR ODOR next	-	
OTHER:		
pH 6.97 Temperature 19.17 (C) Diss	olved Oxygen <u>2.10</u> (mg/L) S	pecific Conductivity 996 (umhos/cm)
Iron(mg/L) Oxidation/Reduction Potential	l <u>~25.\</u> (mv) Turbidity <u></u>	<u>ў. <b>}9</b></u> (UTИ)
	NERAL INFORMATION	
WEATHER SUN/CLEAR OVERCAST/RAIN	wind direction 3	AMBIENT TEMPERATURE _ 55°F
SHIPMENT VIA FEDEX THAND DELIVER		
SHIPPED TO STL - (\AA'AA'AA'		<del></del>
SHIPPED TO. STL - Chicago COMMENTS		
		N. 4.
SAMPLER J Wallace	OBSERVER	) Hade
MATRIX TYPE CODES		IPLING METHOD CODES
DC=DRILL CUTTINGS SL=SEUDGE	B=BAILER	G=GRAB HA=HAND AUGER
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP BR=BRASS RING	H=HOLLOW STEM AUGER
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS SH=HAZARDOUS SOLID WASTE WS=SURFACE WAS	F	
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGH	
OD-ODDANENT SW-SWAD/WIFE	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

## 635 83 HYDRO Geologic

## FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB	PROJECT NAME: AOC 1				
SITE: AOCI	PROJECT NAME; AFC001-1688D	ļ			
SA	MPLE INFORMATION				
SAMPLE ID BGSMW05WG	DATE: 4-12-00 TIME:	152/			
MATRIX TYPE: WG	ENTER SAMPLE NUMBERS FOR QC SA	AMPLES/			
SAMPLING METHOD: BP	BLANKS ASSOCIATED WITH THIS SAI				
LOT CONTROL #: Q   A	MATRIX SPIKE (MS)				
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP (SD)				
CHAIN-OF-CUSTODY #-	FIELD DUP (FD):				
	AMBIENT BLANK (AB)				
SAMPLE BEG DEPTH (FT)		•			
SAMPLE END DEPTH (FT)	EQUIPMENT BLANK (EB) FB 94/20	<u>!9</u>			
GRAB (L) COMPOSITE ( )	TRIP BLANK (TB) <u>TB 04/2</u> 00				
CONTAINER PRESERVATIVE/		LYSIS			
SIZE/TYPE	METHOD SW8260B VC				
70 m2 70/1 3 COOK 0 70/10/10 pH 12					
NOT	ABLE OBSERVATIONS				
PID READINGS SAN	IPLE CHARACTERISTICS MIS	RACTERISTICS MISCELLANEOUS			
1st 2000+ ppm COLOR Clear					
2nd ODOR NOME O 9 MAR 82 OTHER					
	olved Oxygen 4.76 (mg/L) Specific Conductivity	2 9 2 (umbos/sm)			
		control (uninos/cm)			
Iron(mg/L) Oxidation/Reduction Potential					
1	NERAL INFORMATION				
WEATHER SUN/CLEAR OVERCAST/RAIN	WIND DIRECTION AMBIENT TEM	iperature <u>604</u>			
SHIPMENT VIA FEDEX x HAND DELIVER	COURIER OTHER				
SHIPPED TO. STL - Chicago					
COMMENTS:					
SAMPLER C. Williams	OBSERVER 5. Stanford				
MATRIX TYPE CODES	SAMPLING METHOD COI	DES			
DC=DRILL CUTTINGS SL=SLUDGE	B=BAILER G=GR				
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP HA=H	IAND AUGER			
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING H=HO	DLLOW STEM AUGER			
SH=HAZARDOUS SOLID WASTE WS≈SURFACE WATE	ER CS=COMPOSITE SAMPLE HP=H	YDRO PUNCH			
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER SS=SF	PLIT SPOON			
1	DT≈DRIVEN TUBE SP=SU	UBMERSIBLE PUMP			

AFCEE FORM SR.11

## HYDRO Geologia

#### FIELD SAMPLING REPORT

ATION: NAS Fort Worth JRB	PROJECT NAME A	OC 1				
SITE: AOC 1	PROJECT NAME A	FC001-16BBD				
	SAMPLE INFORMATION					
SAMPLE ID BSGMW06WG#1	DATE: 4-12-0	00 TIME: 1325				
MATRIX TYPE: WG	ENTER SAMPLE N	IUMBERS FOR QC SAMPLES/				
SAMPLING METHOD: BP		TED WITH THIS SAMPLE:				
LOT CONTROL #: 0 1 1 A	MATRIX SPIKE (M	(S)				
(Ambient Blank # - Equipment Blank # - Trip Blank # - Co	poler #) MATRIX SPIKE D	UP (SD)				
CHAIN-OF-CUSTODY #:	FIELD DUP (FD).					
	AMBIENT BLANK	(AB)				
SAMPLE BEG DEPTH (FT)	EQUIPMENT BLA	NK (EB). <u>EB0412</u> 00				
SAMPLE END DEPTH (FT)	TRIP BLANK (TB)	<u>TB0412</u> 00				
GRAB ( COMPOSITE ( )	<b>,</b>					
CONTAINER PRESERVATIVE/	ANALYTICAL	ANALYSIS				
SIZE/TYPE	METHOD SW8260B	VOCs				
	NOTABLE OBSERVATIONS					
PID READINGS COLOR	SAMPLE CHARACTERISTICS	RACTERISTICS MISCELLANEOUS				
2nd - ODOR Non						
OTHER _	<u> </u>	20.7				
pH 7.2  Temperature 21.62 (C)						
Iron(mg/L) Oxidation/Reduction F		8.92_ (NTU)				
,	GENERAL INFORMATION	/ 01				
WEATHER SUN/CLEAROVERCAS	T/RAIN WIND DIRECTION	AMBIENT TEMPERATURE 60°				
SHIPMENT VIA FEDEX _ x _ HAND DELI	VER COURIER OTHE	R				
SHIPPED TO STL-Chicago						
COMMENTS						
SAMPLER S. Starford	OBSERVER. <u>C. V</u>	<u> Villiams</u>				
MATRIX TYPE CODES	S.	AMPLING METHOD CODES				
DC = DRILL CUTTINGS SL = SLUDGE	B=BAILER	G=GRAB				
WG=GROUND WATER SO=SOIL LH=HAZARDOUS LIQUID WASTE GS=SOIL GA	BP=BLADDER PUMP					
LH=HAZARDOUS LIQUID WASTE GS=SOIL GA. SH=HAZARDOUS SOLID WASTE WS=SURFAC	<b>\</b> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	H=HOLLOW STEM AUGER IPLE HP≠HYDRO PUNCH				
SE=SEDIMENT SW=SWAB/W						
3W -SWADIN	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP				

XPID not working properly lue to wet/regrey conditions.



LOCATION:	NAS Fort Wort	h JRB	PRO	DJECT NAME	AOC 1		
SITE: ACC	1		_ PRO	DJECT NAME	AFC001-16BBD		
		A.) SAN	APLE INFO	RMATION		165	
SAMPLE ID	WHGLTA02	3WG01 036WG0	ı D	ATE: <u>5-/</u>	<u>6-∞</u> TI	ME: 1312-	
MATRIX TYPE:			Ē	NTER SAMPL	E NUMBERS FO	R QC SAMPLES/	
SAMPLING MET	HOD: GR	9B	В	LANKS ASSO	CIATED WITH T	HIS SAMPLE:	
LOT CONTROL	#: <u>D                                   </u>	<u> </u>		MATRIX SPIK	CE (MS)	_	
(Ambient Blank # - Eq	uipment Blank # -	Trip Blank # - Cooler #)		MATRIX SPIR	KE DUP (SD).		
CHAIN-OF-CUST	TODY #			FIELD DUP (I	FD)·		
				AMBIENT BL	ANK (AB)	<del>-</del> 	
SAMPLE BEG DEP	TH (FT) /	١١٩			BLANK (EB):	3C516CC	
SAMPLE END DEP	TH (FT).	)/A			(TB) TBCS		
GRAB (i) COM		•		1101 22 1101		_ • •	
CONTAINER	PRES	ERVATIVE/	IANA	ALYTICAL		ANALYSIS	
<del></del>	PRE	PARATION	М	ETHOD			
40 mL VOA	Cool to 4	C/HCl to pH < 2	S	W8260B		VOCs	
1L Amber		ool to 4C		SW8 <u>310</u>		PAHs	
40 ml VOA	Cool to	4C/HCL pH < 2		TX1005		TPH	
		NOTA	ABLE OBSI	ERVATIONS			
PID READII	NGS	SAM	PLE CHARAC	TERISTICS		MISCELLANEOUS	
1st J. G CCA		DLOR CIPECIA					
2nd C. EO phiv	·	OR 1167C				<u>-</u>	
- 1 50		HER		166.	-/V-	uctivity <u>4-7 J.</u> (umhos/cm)	
pH 6.81	Temperature	Ad. Clo (C) Disso	lved Oxygen	/ , Z, 1 (mg/	(L) Specific Condi	uctivity <u>L-7 G</u> (umhos/cm)	
Iron(	mg/L) Oxidat	ion/Reduction Potential			ity <u>/d.7/</u> (	NTU)	
1				ORMATION		ن سد دو	
WEATHER SUN	/CLEAR	OVERCAST/RAIN		WIND DIRECTIO	n <u>S</u> амві	ENT TEMPERATURE 85	
SHIPMENT VIA	FEDEXx_	HAND DELIVER	COUR	IERC	THER		
SHIPPED TO ST	L-Chicoc	<u>o</u>			_		
COMMENTS.	(	<u> </u>	<u> </u>			<u>-</u>	
SAMPLER	Williams	· •	c	DBSERVER	J. Wallac		
MATRIX TYPE CODES				SAMPLING METHOD CODES			
DC = DRILL CUTTINGS SL = SLUDGE				B=BAILER		G=GRAB	
WG=GROUND WA	TER	SO=SOIL	1	BP=BLADDER PUMP HA=HAND AUGER			
LH=HAZARDOUS	LIQUID WASTE	GS=SOIL GAS	E	BR=BRASS RING	i	H=HOLLOW STEM AUGER	
SH=HAZARDOUS S	SOLID WASTE	WS=SURFACE WATE	ER C	CS=COMPOSITE	SAMPLE	HP=HYDRO PUNCH	
SE=SEDIMENT		SW=SWAB/WIPE	k	C=CONTINUOUS	FLIGHT AUGER	SS=SPLIT SPOON	
				DT=DRIVEN TU	BE	SP=SUBMERSIBLE PUMP	

## HYDRO Geologic

NAC Estado		DD0	IFOT MARE	AOC 1 Ground	water Sampling		
LOCATION: NAS Fort Worth	JKB		JECT NAME		, •		
SITE:		PRO	JECT NAME	AFC001 16BBI			
	SAI	MPLE INFO	RMATION	_			
SAMPLE ID MW-5WG13		D.A	ATE: [1	2 00	TIME. 0945		
MATRIX TYPE. WG		ĒN	TER SAMPL	E NIIMBERS I	FOR QC SAMPLES/		
SAMPLING METHOD LOW	FLOW				THIS SAMPLE.		
LOT CONTROL #. O 1	A_		MATRIX SPIK	E (MS)	<u> </u>		
(Ambient Blank # - Equipment Blank # - '	Trip Blank # - Cooler #)		MATRIX SPIK	E DUP (SD)			
CHAIN-OF-CUSTODY #.		}	FIELD DUP (F.	(D)			
	1 .		AMBIENT BLA	ANK (AB)	<b>-</b>		
SAMPLE BEG DEPTH (FT) N	A		EQUIPMENT I	BLANK (EB)	FR110200		
SAMPLE END DEPTH (FT)	<sup>l</sup> A	ĺ		(TB) TB			
GRAB (X COMPOSITE ( )			TKIT BEANK (	(IB)			
CONTAINED PRES	CD1/A Titre/	4374	I VTICA I		ANIALNOIO		
<del></del>	ERVATIVE/ PARATION		LYTICAL ETHOD		ANALYSIS		
\	C/HCl to pH < 2		V8260B		VOCs		
				<u></u>			
	NOT	ABLE OBSE	RVATIONS				
PID READINGS			ARACTERISTICS MISCELLANEOUS				
1st 7.9 ppm CO 2nd 0.0 com OD	OR Slight	yellow t	int				
	HER						
pH 8.10 Temperature	23.08 (C) Disse	olved Oxygen	0.75 (mg/I	L) Conductivit	y 295 (umhos/cm)		
	ion/Reduction Potentia			_			
	·		DRMATION		<del></del>		
WEATHER SUN/CLEAR X	OVERCAST/RAIN	· · ·	ZIND DIRECTION	νω A	MBIENT TEMPERATURE 75		
SHIPMENT VIA FEDEX x SHIPPED TO. STL - Chicago	HAND DELIVER	COOKI	ER	THEK			
COMMENTS				<u> </u>			
SAMPLER K. Duran OBSERVER J. Wallace							
MATRIX TYPE CO			SAMPLING M	ETHOD CODES			
DC=DRILL CUTTINGS	SL=SLUDGE	1	=BAILER		G=GRAB		
WG=GROUND WATER	SO=SOIL		P=BLADDER PU		HA=HAND AUGER		
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS		R=BRASS RING		H=HOLLOW STEM AUGE		
SH=HAZARDOUS SOLID WASTE	WS=\$URFACE WAT	ì	S=COMPOSITE		HP=HYDRO PUNCH		
SE=SEDIMENT	SW=SWAB/WIPE	ſ	•	FLIGHT AUGER			
		JD	T=DRIVEN TUB	)C	SP=SUBMERSIBLE PUMP		

## 635 87 HYDRO Geologic

## · FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB	PROJECT NAME AOC 1 Gr	oundwater Sampling
SITE	PROJECT NAME AFC001 1	6BBD
	SAMPLE INFORMATION	
SAMPLE ID MW-10WG13	DATE IL I OO	TIME: 1005
MATRIX TYPE: WG	ENTER SAMPLE NUMBE	ERS FOR OC SAMPLES/
SAMPLING METHOD: LOW FLOW	BLANKS ASSOCIATED V	
LOT CONTROL # O 1 1 A	MATRIX SPIKE (MS)	
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler	#) MATRIX SPIKE DUP (SD)	
CHAIN-OF-CUSTODY #-	FIELD DUP (FD)	<u>-</u>
	AMBIENT BLANK (AB)	
SAMPLE BEG DEPTH (FT) N/A	EQUIPMENT BLANK (EB)	<del></del>
SAMPLE END DEPTH (FT)		
GRAB (X) COMPOSITE ( )	TRIP BLANK (TB)	RITOTOO
	1	
CONTAINER PRESERVATIVE/ SIZE/TYPE # PREPARATION	ANALY TICAL METHOD	ANALYSIS
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B	VOCs
	OTABLE OBSERVATIONS	,
	SAMPLE CHARACTERISTICS	MISCELLANEOUS
	1 hydrocarbon	
OTHER	<del>_</del>	
pH <u>7.43</u> Temperature <u>22.42</u> (C) D	rissolved Oxygen(mg/L) Condu	ctivity <u>916</u> (umhos/cm)
Iron (mg/L) Oxidation/Reduction Potes	ntial <u>– 99. 7 (</u> mv) Turbidity <u>3. (</u>	(NTU)
<u> </u>	GENERAL INFORMATION	
WEATHER SUN/CLEAR OVERCAST/R	AIN X WIND DIRECTION S	AMBIENT TEMPERATURE 72°
SHIPMENT VIA FEDEXx HAND DELIVER		
SHIPPED TO STL - Chicago	COORDA Office	_
COMMENTS		7
SAMPLER K. Duran	OBSERVER	Wallace
MATRIX TYPE CODES	SAMPLIN	NG METHOD CODES
DC=DRILL CUTTINGS SL≈SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS SH=HAZARDOUS SOLID WASTE WS=SURFACE W	BR≈BRASS RING ATER CS≈COMPOSITE SAMPLE	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE WS=SURFACE W SE=SEDIMENT SW=SWAB/WIPE		HP=HYDRO PUNCH  IGER SS=SPLIT SPOON
SW = SWAB/WIPE	DT=DRIVEN TIBE	SP=SLIBMERSIBLE PLIMP

AFCEE FORM SR 11



CATION NAS Fort Worth JRB	PRO	JECT NAME	AOC 1 Groundwater Sampling		
SITE <sup>,</sup>	PRO	JECT NAME	AFC001 16BBD		
SAI	MPLE INFO	RMATION			
SAMPLE ID SAV-2WG13	D/	ATE: II I	00 TIME: 1/23		
MATRIX TYPE WG	Ę)	TER SAMPI.	E NUMBERS FOR QC SAMPLES/		
SAMPLING METHOD: LOW FLOW			CIATED WITH THIS SAMPLE:		
LOT CONTROL # D 1 4		MATRIX SPIK	E (MS)		
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)		MATRIX SPIK	E DUP (SD)		
CHAIN-OF-CUSTODY #-	_	FIELD DUP (F	DUP05WG (1200)		
.1.			ANK (AB)		
SAMPLE BEG DEPTH (FT)		EQUIPMENT	BLANK (EB) <u>EBIIO</u> 100		
SAMPLE END DEPTH (FT) NA			(TB)		
GRAB() COMPOSITE()			-		
CONTAINER PRESERVATIVE/	ANA	LYTICAL	ANALYSIS		
SIZE/TYPE # PREPARATION		ETHOD	· VOCs		
40 mL VOA 3 Cool to 4C/HCl to pH < 2		V8260B	, , , , , , , , , , , , , , , , , , , ,		
NOT	ABLE OBSE	RVATIONS	-		
	IPLE CHARAC	HARACTERISTICS MISCELLANEOUS			
2nd 0.00 pom COLOR Clear	h. d.c.	00-1			
OTHER					
			L) Conductivity <u>817</u> (umhos/cm)		
Iron (mg/L) Oxidation/Reduction Potentia	11 <u>-97.6</u>	(mv) Turbidi	ny <u>55</u> (NTU)		
	NERAL INF				
weather· Sun/clear overcast/rain	<u>×_</u> v	VIND DIRECTION	N $S$ ambient temperature $7S$		
SHIPMENT VIA: FEDEXx HAND DELIVER					
SHIPPED TO STL - Chicago					
COMMENTS					
SAMPLER K. Duran	0	BSERVER	J. Wallace		
MATRIX TYPE CODES	_		SAMPLING METHOD CODES		
DC=DRILL CUTTINGS SL=SLUDGE	h	=BAILER	G=GRAB		
WG=GROUND WATER SO=SOIL		P=BLADDER PU			
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	l l	R=BRASS RING			
SH=HAZARDOUS SOLID WASTE WS=SURFACE WAT		S=COMPOSITE			
SE=SEDIMENT SW=SWAB/WIPE		:=CONTINUOUS T=DRIVEN TUI	· · · =		

## 635 89 HYDRO Geologic«

#### FIELD SAMPLING REPORT

LOCATION: NAS Fort Worth JRB	PROJECT NAME October Quarterly Groundwater Sampling				
SITE	PROJECT NAME AFC001-33DDA				
SAMPLE INFORMATION					
SAMPLE ID DUP05WG13	DATE (1) 00 TIME. 1200				
MATRIX TYPE· WG	ENTER SAMPLE NUMBERS FOR QC SAMPLES/				
SAMPLING METHOD: LOW FLOW	BLANKS ASSOCIATED WITH THIS SAMPLE.				
LOT CONTROL #: _O _/ _L _A	MATRIX SPIKE (MS)				
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP (SD)				
CHAIN-OF-CUSTODY #:	FIELD DUP (FD) SAV-2WG-13				
SAMPLE BEG DEPTH (FT) NA SAMPLE END DEPTH (FT) NA SAMPLE END DEPTH (FT) NA SAMPLE ( )	AMBIENT BLANK (AB)  EQUIPMENT BLANK (EB) EB110100  TRIP BLANK (TB) 773110100				
CONTAINER PRESERVATIVE/	ANALYTICAL ANALYSIS				
SIZE/TYPE # PREPARATION	ANALYTICAL ANALYSIS METHOD				
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B VOCs				
	0.0000011.0000				
	OBSERVATIONS				
PID READINGS SAMPLE C	HARACTERISTICS MISCELLANEOUS				
	vdrocarbon				
OTHER ,					
1 1	Oxygen(mg/L) Conductivity(umhos/cm)				
Iron NA (mg/L) Oxidation/Reduction Potential 7	7.6 (mv) Turbidity 5.5 (NTU)				
GENERA	L INFORMATION				
WEATHER SUN/CLEAR OVERCAST/RAIN × WIND DIRECTION S AMBIENT TEMPERATURE 75°  SHIPMENT VIA FEDEX x HAND DELIVER OTHER  SHIPPED TO STL - Chicago					
COMMENTS	<del></del>				
SAMPLER K.Duran	OBSERVER J. Wallace				
MATRIX TYPE CODES DC=DRILL CUTTINGS SL=SLUDGE	SAMPLING METHOD CODES B=BAILER G=GRAB				
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP HA=HAND AUGER				
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING H=HOLLOW STEM AUGER				
SH=HAZARDOUS SOLID WASTE WS=SURFACE WATER	CS=COMPOSITE SAMPLE HP=HYDRO PUNCH				
SE=SEDIMENT SW≠SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER SS=SPLIT SPOON				
	DT = DRIVEN TUBE SP = SUBMERSIBLE PUMP				

AFCEE FORM SR 11



ATION NAS Fort Worth JRB	ı	PROJECT NAME AO	C 1 Groundwater Sampling		
SITE:	<del></del>	PROJECT NAME AF	C001 16BBD		
	SAMPLE INFORMATION				
SAMPLE ID BGSMW03WG13 DATE: 11 1 00 TIME: 1440			00 TIME: 1440		
MATRIX TYPE. WG	_	ENITED CAMPI E NI	IMPERS FOR OC SAMPLES!		
SAMPLING METHOD. LOW FLOW BLANKS ASSOCIATED WITH THIS SAMPLE.					
LOT CONTROL # O I I A . MATRIX SPIKE (MS)					
(Ambient Blank # - Equipment Blank # - Trip Blank	: # - Cooler #)	MATRIX SPIKE DUI	P (SD)		
CHAIN-OF-CUSTODY #.		FIELD DUP (FD)			
		AMBIENT BLANK (			
SAMPLE BEG DEPTH (FT)					
SAMPLE END DEPTH (FT)		EQUIPMENT BLAN	K (EB) <u>EB1101</u> 00		
,	+	TRIP BLANK (TB)	TB110100		
GRAB (X COMPOSITE ( )					
CONTAINER PRESERVATIV	E/ ,	ANALYTICAL	ANALYSIS		
SIZE/TYPE # PREPARATIO	N	METHOD			
40 mL VOA 3 Cool to 4C/HCl to	oH<2	SW8260B	VOCs		
	NOTABLE OF	BSERVATIONS			
PID READINGS					
COLOR	Cla/	RACTERISTICS	MISCELLANEOUS		
2nd ODOR	Slight hyd	dracachus			
OTHER	=11 <del>911 1191</del>	WERT SITE			
pH 7.39 Temperature 23.60	(C) Dissolved Oxyg	en <u>0.85 (mg/L)</u>	Conductivity 826 (umhos/cm)		
Iron //A (mg/L) Oxidation/Redu					
	GENERAL I	NFORMATION			
  WEATHER SUN/CLEAR OVE	RCAST/RAIN X	WIND DIRECTION	SW AMBIENT TEMPERATURE 69		
SHIPMENT VIA FEDEX x HAND					
SHIPPED TO STL - Chicago	DELIVER CC	ORIEKOTHER			
COMMENTS	<del></del>				
12 A	_		T. la. II.		
SAMPLER /(.I)UIAA	<del></del> _	OBSERVER	J. Wallace		
MATRIX TYPE CODES		SAI	MPLING METHOD CODES		
DC=DRILL CUTTINGS SL=SLI		B=BAILER	G=GRAB		
WG=GROUND WATER SO=SO	L	BP=BLADDER PUMP	HA=HAND AUGER		
LH=HAZARDOUS LIQUID WASTE GS=SO		BR=BRASS RING	H=HOLLOW STEM AUGE		
	RFACE WATER	CS=COMPOSITE SAMP			
SE=SEDIMENT SW=SV	AB/WIPE	C=CONTINUOUS FLIGH	HT AUGER SS=SPLIT SPOON		
		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP		



LOCATION· NAS Fort Worth JRB SITE:	PROJECT NAME ACC 1 Groundwater Sampling PROJECT NAME AFC001 16BBD
	AMPLE INFORMATION
SAMPLE ID BGSMW05WG13	DATE: 11 02 00 TIME: 0832
MATRIX TYPE WG	ENTER SAMPLE NUMBERS FOR QC SAMPLES/
SAMPLING METHOD: LOW FLOW	BLANKS ASSOCIATED WITH THIS SAMPLE
LOT CONTROL # O A L A	MATRIX SPIKE (MS)
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler	#) MATRIX SPIKE DUP (SD)
CHAIN-OF-CUSTODY #	FIELD DUP (FD)
	AMRIENT BLANK (AB)
SAMPLE BEG DEPTH (FT)	EQUIPMENT BLANK (EB). EB10200
SAMPLE END DEPTH (FT)	TRIP BLANK (TB) TB110200
GRAB (X) COMPOSITE ( )	TRIF BLANK (18)
CONTAINER PRESERVATIVE/	ANALYTICAL ANALYSIS
SIZE/TYPE # PREPARATION	METHOD
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B VOCs
No	TABLE OBSERVATIONS
	AMPLE CHARACTERISTICS MISCELLANEOUS
ist 0.00ppm COLOR Clear	
2nd O.Objem ODOR none	
OTHER	ssolved Oxygen 0.97 (mg/L) Conductivity 702 (umhos/cm)
	tial /55.2 (mv) Turbidity /.05 (NTU)
	ENERAL INFORMATION  IN WIND DIRECTION AMBIENT TEMPERATURE  COURIER OTHER
COMMENTS	T. N. 11
SAMPLER K. Duran	OBSERVER J. Wallace
MATRIX TYPE CODES	SAMPLING METHOD CODES
DC=DRILL CUTTINGS SL=SLUDGE	B=BAILER G=GRAB
WG=GROUND WATER SO = SOIL	BP=BLADDER PUMP HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING H=HOLLOW STEM AUGER CS=COMPOSITE SAMPLE HP=HYDRO PUNCH
SH=HAZARDOUS SOLID WASTE WS=SURFACE W SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER SS=SPLIT SPOON
SW = SWAB/WIFE	DT=DRIVEN TUBE SP=SUBMERSIBLE PUMP



CATION:	NAS Fort Wort	n JRB	PROJECT NAME. AOG	1 Groundwater Samp	ling
SITE:			PROJECT NAME AFO	001 16BBD	
		SAMP	LE INFORMATION		
SAMPLE ID	BGSMW06W	G13	DATE: ////	20 TIME	1726
MATRIX TYPE:	: WG	<del></del>	ENTER SAMPLE NU	MDEDS EOD OC S	AMDI ES/
SAMPLING ME	THOD: LOV	v FLOW	BLANKS ASSOCIAT		
LOT CONTROL	#: 0 1 1	A	MATRIX SPIKE (MS		
(Ambient Blank # - E	iquipment Blank # -	Trip Blank # - Cooler #)	MATRIX SPIKE DUI	(SD)	
CHAIN-OF-CUS	STODY #:		FIELD DUP (FD)		
			AMBIENT BLANK (		
SAMPLE BEG DE	PTH (FT) AU	A			
SAMPLE END DE				(EB) <u>EB110</u>	_
l	•	<i>^</i>	TRIP BLANK (TB)	TB110100	,
GRAB (X) CO	MPOSITE ( )		•		
CONTAINER	PRES	ERVATIVE/	ANALYTICAL	ANA	LYSIS
SIZE/TYPE	<del></del>	PARATION	METHOD		
40 mL VOA	3 Cool to 4	C/HCl to pH < 2	SW8260B	V	OCs
		NOTAB	LE OBSERVATIONS		
PID READ	DINGS		CHARACTERISTICS	MIS	SCELLANEOUS
9.8 po		DLOR Cloudy	•		
2nd al ppn	<u> </u>	oor none			
		HER			<u> </u>
pH 7.67			d Oxygen <u>1.95</u> (mg/L)		(umhos/cm)
Iron <i>1/A</i>	_(mg/L) Oxidai	ion/Reduction Potential	<u>(09.9</u> (mv) Turbidity	<u>//. 53</u> (NTU)	
		GENE	RAL INFORMATION		
WEATHED SII	N/CI FAR	OVERCAST/DAIN .	× wind direction	S AMRIENT TEN	MPERATURE 75°
			<del></del>		AT EIGHT ONE
		HAND DELIVER	COURIEROTHER	<del></del>	
SHIPPED TO S	TL - Chicago				
COMMENTS		<u>.                                    </u>			
SAMPLER	K. Dura	1	OBSERVER	J. Wallace	
<u>N</u>	IATRIX TYPE CO	DDES	SAI	MPLING METHOD CO	DES
DC=DRILL CUTT	INGS	SL=SLUDGE	B=BAILER	G≠G]	RAB
WG≃GROUND W.	ATER	SO=SOIL	BP=BLADDER PUMP	HA=1	HAND AUGER
	S LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H≠H	OLLOW STEM AUGER
SH=HAZARDOUS	S SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMP		HYDRO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS FLIG		PLIT SPOON
1			DT=DRIVEN TUBE	SP=S	UBMERSIBLE PUMP



LOCATION:	NAS Fort Worl	h JRB, Texas	PROJECT NAME	October 2000 Quarterly	/ Sampling	
SITE.			PROJECT NAME	AFC001-16BBD		
		SAMPI	LE INFORMATION			
SAMPLE ID	WHGLTA03	6WG013	DATE: /// 2/	oo TIME	: /206	
MATRIX TYPE	WG		ENTER SAMPLE	NUMBERS FOR Q	C SAMPLES/	
SAMPLING MET	HOD: Lo	w Flow		BLANKS ASSOCIATED WITH THIS SAMPLE:		
LOT CONTROL			MATRIX SPIKE	MATRIX SPIKE (MS)		
(Ambient Blank # - Eq	uipment Blank # -	Trip Blank # - Cooler #)	MATRIX SPIKE	MATRIX SPIKE DUP (SD)		
CHAIN-OF-CUST	ΓODY #:		FIELD DUP (FD)	)		
			AMBIENT BLAN	NK (AB)		
SAMPLE BEG DEP	TH (FT)			ANK (EB) EB 11	— n l oa	
SAMPLE END DEP	TH (FT)			B) <u>ES//02</u>	<del></del>	
GRAB ( COM	MPOSITE ( )		I RIP BLAINK (1)	B) <u> </u>		
CONTAINER	PRES	ERVATIVE/	ANALYTICAL		ANALYSIS	
	# PRE	PARATION	METHOD			
40 mL VOA	Cool to 4	C/HCl to pH < 2	SW8260B	<u> </u>	VOCs	
		NOTABL	E OBSERVATIONS			
PID READII	NGS		CHARACTERISTICS		MISCELLANEOUS	
l st	CC	LOR c/an				
2nd 🗷 🔊	ŌŒ	OR. None		,		
		HER				
pH6_9_	Temperature	Z4.3 (C) Dissolved	Oxygen(mg/L)	Conductivity 10	99 (umhos/cm)	
Iron(	mg/L) Oxidai	ion/Reduction Potential	7 (mv) Turbidity	7.2 (NTU	J)	
		GENER	AL INFORMATION			
WEATHER SUN	/CLEAR	OVERCAST/RAIN	WIND DIRECTION	SL:// AMBIENT	TEMPERATURE 79 %	
Į.			COURIEROTH		<del></del>	
	L-Chic		· ——-			
COMMENTS		7		<del></del>		
SAMPLER	K D.	/4~	OBSERVER	Wall_	·	
MATRIX TYPE CODES		<del> </del>	SAMPLING METHOD	CODES		
DC = DRILL CUTTIN		SL=SLUDGE	B=BAILER		=GRAB	
WG=GROUND WA	TER	SO=SOIL	BP=BLADDER PUM	P H	A=HAND AUGER	
LH=HAZARDOUS	LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	Н	=HOLLOW STEM AUGER	
SH=HAZARDOUS S	SOLID WASTE	WS=SURFACE WATER	CS≈COMPOSITE SA	MPLE H	P=HYDRO PUNCH	
SE = SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS FI	-	S=SPLIT SPOON	
			DT = DRIVEN TUBE	SI	P=SUBMERSIBLE PUMP	

AFCEE FORM SR 11

## HYDRO Geologic

NAS Fort Worth JRB, Texas	PROJECT NAME October 2000 Quarterly Sampling
SITE:	PROJECT NAME· AFC001-16BBD
SAN	PLE INFORMATION
SAMPLE ID WHGLTA037WG013	DATE: 11 2 00 TIME: 1/20
MATRIX TYPE: WG	ENTER SAMPLE NUMBERS FOR QC SAMPLES/
SAMPLING METHOD. LOW FLOW	BLANKS ASSOCIATED WITH THIS SAMPLE
LOT CONTROL # O _ L _ A	MATRIX SPIKE (MS) WHGLTA037WG013m5
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP (SD) WHGLTA037WGO13V
CHAIN-OF-CUSTODY #·	FIELD DUP (FD)
SAMPLE BEG DEPTH (FT) NA	EBIIO200
SAMPLE END DEPTH (FT) NA	
GRAB (X) COMPOSITE ( )	TRIP BLANK (TB) TRII 0200
CONTAINER PRESERVATIVE/	ANALYŢICAL . ANALYSIS
SIZE/TYPE # PREPARATION	METHOD
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B VOCs
NOTA	BLE OBSERVATIONS
<u> </u>	PLE CHARACTERISTICS MISCELLANEOUS
1st 1033 ppn COLOR Clear	
2nd 0.0 ppm ODOR OTHER	
	ved Oxygen 1.13 (mg/L) Conductivity 1145 (umhos/cm)
Iron NA (mg/L) Oxidation/Reduction Potential	
	ERAL INFORMATION
	WIND DIRECTION Δ AMBIENT TEMPERATURE 75
SHIPMENT VIA FEDEXx HAND DELIVER	COURIER OTHER
SHIPPED TO STL - Chicago	
SAMPLER J. Wallace	V 12
SAMPLER J. VVAILACE	OBSERVER CADU
MATRIX TYPE CODES	SAMPLING METHOD CODES
DC=DRILL CUTTINGS SL=SLUDGE	B=BAILER G=GRAB
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING H=HOLLOW STEM AUGE
SH=HAZARDOUS SOLID WASTE WS=SURFACE WAT	
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER SS=SPLIT SPOON
	DT=DRIVEN TUBE SP=SUBMERSIBLE PUMP

## 635 95 HYDRO

LOCATION: NAS Fort Worth JRB, Texas	PROJECT NAME October	2000 Quarterly Sampling
SITE:	PROJECT NAME AFC001-	16BBD
94 037 S.	AMPLE INFORMATION	
SAMPLE ID WHGLTA <del>038</del> WG013MS	DATE. 112 00	TIME: 1120
MATRIX TYPE: WG	ENTER SAMPLE NUMB	EDS FOR OC SAMPLES!
SAMPLING METHOD: LOW FLOW	BLANKS ASSOCIATED	
OT CONTROL #. O L L A	MATRIX SPIKE (MS)· <b>√</b>	VHGCTAU37WGO13MS
Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #		WHGLIA037W6013m
	FIELD DUP (FD)	
CHAIN-OF-CUSTODY #:	_	ţ
SAMPLE BEG DEPTH (FT) NA	AMBIENT BLANK (AB)	
SAMPLE END DEPTH (FT)	EQUIPMENT BLANK (EB	
•	TRIP BLANK (TB)	TB110200
GRAB 🚫 COMPOSITE ( )		}
CONTAINER PRESERVATIVE/	ANALYTICAL	ANALYSIS
SIZE/TYPE # PREPARATION	METHOD	
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B	VOCs
NO NO	TABLE OBSERVATIONS	
	MPLE CHARACTERISTICS	MISCELLANEOUS
ist 1033 ppm COLOR CHEA!		
and 0.0000 ODOR none		
OTHER	<del></del>	
pH	_	i i
Iron(mg/L) Oxidation/Reduction Potent	tal	(NTU)
G	ENERAL INFORMATION	. )
weather sun/clear $m{ imes}$ overcast/ra:	in wind direction ん	AMBIENT TEMPERATURE 75
SHIPMENT VIA FEDEXx HAND DELIVER		
SHIPPED TO STL - Chicago		<del>-</del>
SALFIED TO STEE STEE		
COMMENTS		
SAMPLER. J. Wallace	OBSERVER	Dur-
MATRIX TYPE CODES	SAMPLI	NG METHOD CODES
DC=DRILL CUTTINGS SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE WS=SURFACE WA		HP=HYDRO PUNCH
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGHT A	
	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP



CATION:	NAS Fort Worth	ı JRB, Texas	PROJECT NAME	October 2000 Quarterly Samplir	ıg
SITE:			PROJECT NAME	AFC001-16BBD	
	وه ۱۹۰	P SAMP	LE INFORMATION		
SAMPLE ID	WHGLTA036	BWG013MSD	DATE: LL 2	OO TIME:	120
MATRIX TYPE	: WG		ENTER SAMPLE	NUMBERS FOR QC SAM	PI FS/
SAMPLING ME	THOD: LOW	FLOW		ATED WITH THIS SAMP	
LOT CONTROL				(MS) WHGLTA037W	
		Trip Blank # - Cooler #)	MATRIX SPIKE	DUP (SD) WHGUTAO	37 W6013M
CHAIN-OF-CU	STODY #·		FIELD DUP (FD)		
-			AMBIENT BLAN	JK (AB)	
SAMPLE BEG DE	PTH (FT) N			ANK (EB) EB11020	U
	PTH (FT)				
	•	13	TRIP BLANK (T	B)	
GRAB ⋈ CO	MIPOSITE ( )				
CONTAINER	PRES	ERVATIVE/	ANALYTICAL	ANALYS	IS
SIZE/TYPE	# PRE	PARATION	METHOD		
40 mL VOA	3 Cool to 4	C/HCl to pH < 2	SW8260B	VOCs	
		NOTAB	LE OBSERVATIONS		
PID READ	DINGS	SAMPL	E CHARACTERISTICS	MISCEI	LANEOUS
st 1073	ico	LOR CLIA		1	
and Owop	<u> </u>	OR none			
<del></del>		HER			
				Conductivity 1145 (u	mhos/cm)
Iron N(A	_(mg/L) Oxidai	ion/Reduction Potential	- III.O_(mv) Turbidity	<u> </u>	
		GENE	RAL INFORMATION		
WEATHER SI	IN/CI EAD K	OVEDCAST/DAIN	WIND DIRECTION	AMBIENT TEMPE	RATURE 75°
SHIPMENT VIA.	FEDEX x	HAND DELIVER	COURIEROTH	HER	
SHIPPED TO S	TL - Chicay				
COMMENTS					
SAMPLER	J. Wallan	<u> </u>	OBSERVER	Kex Dun	
	MATRIX TYPE CO	DES		SAMPLING METHOD CODES	
DC=DRILL CUTI		SL=SLUDGE	B=BAILER	G=GRAB	
WG=GROUND W		SO≈SOIL	BP=BLADDER PUM		D AUGER
LH=HAZARDOU	S LIQUID WASTE		BR=BRASS RING		OW STEM AUGER
SH=HAZARDOU:	S SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SA	AMPLE HP=HYD	RO PUNCH
SE=SEDIMENT		SW=SWAB/WIPE	C=CONTINUOUS F	LIGHT AUGER SS=SPLIT	SPOON
			DT=DRIVEN TUBE	SP=SUBN	IERSIBLE PUMP



ATION: NAS Fort Worth JRB	PROJECT NAME: AOC	1		
SITE:	PROJECT NAME AFC	001-16BBD		
SAMPLE INFORMATION				
SAMPLE ID SAV-2WG <b>(1</b> )	DATE: 4-12-00	) TIME: 1000		
MATRIX TYPE: WG	ENTED SAMDLE NUM	MBERS FOR QC SAMPLES/		
SAMPLING METHOD: BP		D WITH THIS SAMPLE:		
LOT CONTROL #: O A	MATRIX SPIKE (MS).	MATRIX SPIKE (MS).		
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP	(SD)		
CHAIN-OF-CUSTODY #:	FIELD DUP (FD):			
	AMBIENT BLANK (A	в) —		
SAMPLE BEG DEPTH (FT)		(EB): EB041200		
SAMPLE END DEPTH (FT).		TB 04 12 00		
GRAB ( COMPOSITE ( )	IRIP BLANK (IB)	1 Bolizoo		
CONTAINER PRESERVATIVE/	ANALYTICAL	ANALYSIS		
SIZE/TYPE # PREPARATION	METHOD			
40 mL VOA 3 Cool to 4C/HCl to pH < 2	SW8260B	VOCs		
NOTABI	LE OBSERVATIONS			
PID READINGS SAMPLE	CHARACTERISTICS	MISCELLANEOUS		
COLOR (LEAT				
2nd - ODOR Fuel-like				
pH 6.80 Temperature 18.57(C) Dissolved	- 0 (10 · · · ·	(fix) U22		
Iron(mg/L) Oxidation/Reduction Potential				
GENER	RAL INFORMATION From	14he		
WEATHER: SUN/CLEAR OVERCAST/RAIN	WIND DIRECTION N	AMBIENT TEMPERATURE 60		
SHIPMENT VIA. FEDEXx HAND DELIVER	COURIEROTHER			
SHIPPED TO STL - Chicago				
COMMENTS.				
SAMPLER S. Stanford	OBSERVER C. W:	lliams		
MATRIX TYPE CODES SAMPLING METHOD CODES				
DC=DRILL CUTTINGS SL=SLUDGE	B=BAILER	G = GRAB		
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER		
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER		
SH=HAZARDOUS SOLID WASTE WS=SURFACE WATER	CS=COMPOSITE SAMPL			
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGH			
	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP		

\* PID not working properly due to rain.



LOCATION: NAS Fort Worth JRB	PROJECT NAME AOC	C1	
SITE: ACCA	PROJECT NAME. AFC	:001-16BBD	
SAM	PLE INFORMATION		
SAMPLE ID BGSMW03WG01	DATE: 4.11.00	TIME: /351	
MATRIX TYPE: WG	ENTED CAMDLE NU	MBERS FOR QC SAMPLES/	
SAMPLING METHOD.		ED WITH THIS SAMPLE:	
LOT CONTROL #: O 1 1 A	MATRIX SPIKE (MS	·	
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP	(SD)	
CHAIN-OF-CUSTODY #.	FIELD DUP (FD)	<b>~</b>	
Circuit of Course I ii.	AMBIENT BLANK (A		
SAMPLE BEG DEPTH (FT)			
SAMPLE END DEPTH (FT)		(EB) CBOYIIOO	
GRAB (Y COMPOSITE ( )	TRIP BLANK (TB)	TRIP BLANK (TB) TBOY 1100	
GRAB (9) COMPOSITE ( )		•	
CONTAINER PRESERVATIVE/	ANALYTICAL	ANALYSIS	
SIZE/TYPE # PREPARATION	METHOD		
40 mL VOA 3 Cool to 4C/HCl td pH < 2	SW8260B	VOCs	
NOTA	BLE OBSERVATIONS	-	
	LE CHARACTERISTICS	MISCELLANEOUS	
ist Open COLOR Clear	22 0, , , , , , , , , , , , , , , , , ,		
and Ogom ODOR Sullik	<u> </u>		
OTHER			
pH 6.70 Temperature 22.54 (C) Dissolv	ved Oxygen 1.89 (mg/L) 5	peerfic Conductivity	
Iron (mg/L) Oxidation/Reduction Potential _	- 97.3 (mv) Turbidity	<b>2.28</b> (UTN)	
<del></del>	ERAL INFORMATION		
WEATHER SUN/CLEAROVERCAST/RAIN _		AMBIENT TEMBERATURE 45°F	
SHIPMENT VIA FEDEXx HAND DELIVER	COURIER OTHER		
SHIPPED TO STL - Chicago			
COMMENTS			
SAMPLER SStonford	OBSERVER	OHade	
MATRIX TYPE CODES	SAN	IPLING METHOD CODES	
DC=DRILL CUTTINGS SL=SLUDGE	B=BAILER	G=GRAB	
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER	
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER	
SH=HAZARDOUS SOLID WASTE WS=SURFACE WATER	CS=COMPOSITE SAMPI	E HP=HYDRO PUNCH	
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGH	IT AUGER SS=SPLIT SPOON	
	DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP	



ATION: NAS Fort Worth JRB	PROJECT NAME AOC 1			
SITE: AOC 1	PROJECT NAME AFC001-16BBD			
SAN	MPLE INFORMATION .			
SAMPLE ID MW-5WG	DATE: 4.11.00 TIME: 1	<u>53</u> 6		
MATRIX TYPE: WG	ENTER SAMPLE NUMBERS FOR QC SAI	MDI ES/		
SAMPLING METHOD:	BLANKS ASSOCIATED WITH THIS SAM			
LOT CONTROL #: U \ \ A	MATRIX SPIKE (MS).	MATRIX SPIKE (MS).		
(Ambient Blank # - Equipment Blank # - Trip Blank # - Cooler #)	MATRIX SPIKE DUP (SD).			
CHAIN-OF-CUSTODY #:	FIELD DUP (FD)			
	AMBIENT BLANK (AB)			
SAMPLE BEG DEPTH (FT)	EQUIPMENT BLANK (EB) (BOY 1100			
SAMPLE END DEPTH (FT)				
GRAB ( COMPOSITE ( )	TRIP BLANK (TB): TBOYNOO			
Old ID ( )				
CONTAINER PRESERVATIVE/	ANALYTICAL · ANALY	SIS		
SIZE/TYPE # PREPARATION	METHOD			
40 miL VOA 3 Cool to 4C/HCl to pH < 2	' SW8260B VOC	<u> </u>		
NOTA	ABLE OBSERVATIONS			
		ELLANEOU\$		
Open COLOR Clea-				
2nd Off ODOR ODOR				
pH 7.26 Temperature 19.18 (C) Disso	olved Oxygen 2.61 (mg/L) Specific Conductivity 2	(umhos/cm)		
Iron(mg/L) Oxidation/Reduction Potential	89.5 (mv) Turbidity 18.3 (NTU)			
GEN	NERAL INFORMATION			
WEATHER SHAME ARE WEREACTERATE	× WIND DIRECTION 5 AMBIENT TEMP	EDATURE SAF		
		ERATURE DUT		
SHIPMENT VIA FEDEXx HAND DELIVER	COURIER OTHER			
SHIPPED TO STL.				
COMMENTS.				
SAMPLERSStanford	OBSERVER NHAVE			
MATRIX TYPE CODES	SAMPLING METHOD CODE			
DC=DRILL CUTTINGS SL=SLUDGE	B≈BAILER G=GRA	В		
WG=GROUND WATER SO=SOIL	BP=BLADDER PUMP HA=HA	ND AUGER		
LH=HAZARDOUS LIQUID WASTE GS=SOIL GAS	BR=BRASS RING H=HOL	LOW STEM AUGER		
SH=HAZARDOUS SOLID WASTE WS=SURFACE WATE	ER CS=COMPOSITE SAMPLE HP=HY	DRO PUNCH		
SE=SEDIMENT SW=SWAB/WIPE	C=CONTINUOUS FLIGHT AUGER SS=SPL	IT SPOON		
	DT = DRIVEN TUBE SP=SUE	MERSIBLE PUMP		



LOCATION. NAS Fort Wor	th JRB	PROJECT NAME AC	OC 1
SITE:AOC_1		PROJECT NAME. AF	FC001-16BBD
	SAMPLE I	NFORMATION	
SAMPLE ID MW-10WG	1	DATE: 4-11-0	0 TIME: 1525
MATRIX TYPE: WG		ENTER SAMPLE N	UMBERS FOR QC SAMPLES/
SAMPLING METHOD. BY	>		TED WITH THIS SAMPLE:
LOT CONTROL #. 0 1	A	MATRIX SPIKE (M	(S)
(Ambient Blank # - Equipment Blank # -	Trip Blank # - Cooler #)	MATRIX SPIKE DU	UP (SD)
CHAIN-OF-CUSTODY #:	j	FIELD DUP (FD).	
		AMBIENT BLANK	(AB)
SAMPLE BEG DEPTH (FT)			NK (EB) EB041100
SAMPLE END DEPTH (FT)			TB041100
GRAB ( COMPOSITE ( )		TRIF BLANK (1D)	<u>, , , , , , , , , , , , , , , , , , , </u>
CONTAINER PRE	SERVATIVE/	ANALYTICAL	ANALYSIS
<del></del>	PARATION	METHOD	
40 mL VOA 3 Cool to	4C/HCl to pH < 2	SW8260B	VOCs
	NOTABLE (	BSERVATIONS	
PID READINGS		ARACTERISTICS	MISCELLANEOUS
1st 11.5 ppm at Wellharton		1010121101100	
	DOR NONE		
)	THER -		
pH 6.91 Temperature	$\frac{20.26}{(C)}$ Dissolved Ox	ygen <u>1.25</u> (mg/L)	Specific Conductivity 562 (umhos/cm)
Iron(mg/L) Oxida	tion/Reduction Potential -10	3_(mv) Turbidity_	6.04 (NTU)
	GENERAL	INFORMATION Fr	on the
WEATHER SUN/CLEAR	OVERCAST/RAIN	WIND DIRECTION S	E AMBIENT TEMPERATURE 70°
  SHIPMENT VIA FEDEXx			
SHIPPED TO STL-Chica			
COMMENTS	0		
SAMPLER J. Wallace	Le _	OBSERVER C. \	Williams
MATRIX TYPE CO	ODES	SA	AMPLING METHOD CODES
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	\$O=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAM	PLE HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIC	GHT AUGER SS≃SPLIT SPOON
		DT=DRIVEN TUBE	SP≈SUBMERSIBLE PUMP



CATION.	NAS Fort Worth	JRB	P	ROJECT NAME	A0C 1	
ыfЕ:	Field How	: <u>{</u> }\$	P	ROJECT NAME	AFC001-16BBD	•
<del>-</del>			AMPLE IN	FORMATION		
SAMPLE ID	TB04 <u>:1</u> 00			DATE: 4.1	7 00	TIME: C)7 10
MATRIX TYPE	: WG	,		ENTED SAMDI	E NUMBERS E	OR QC SAMPLES/
SAMPLING ME	THOD: 4	b PAE.O		BLANKS ASSO		
LOT CONTROL				MATRIX SPIK	CE (MS):	<del></del>
(Ambient Blank # - I	Equipment Blank # -	— —— Trip Blank # - Cooler /	#)	MATRIX SPIK	KE DUP (SD)	·
CHAIN-OF-CU	STODY #:			FIELD DUP (I	FD)	
<del></del>					ANK (AB)	
SAMPLE BEG DE	PTH (FT) N	A			BLANK (EB) EB	
SAMPLE END DE	n.)/			-		<del>_</del>
GRAB (V) CO				TRIP BLANK	(TB)	
GRAB (V) CC						
CONTAINER	<del></del>	ERVATIVE/	A	NALYTICAL		ANALYSIS
SIZE/TYPE		PARATION	_	METHOD		
40 mL VOA	3 Cool to 4	C/HC1 to pH < 2		SW8260B		
_		NO	TABLE OB	SERVATIONS		
PID REAL	DINGS	S	AMPLE CHAR	ACTERISTICS		MISCELLANEOUS
		LOR —				
Znd		OR —				<u> </u>
<u> </u>		HER .			(I) E NH	
						nductivity(umhos/cm)
Iron	_(mg/L) Oxidat	ion/Reduction Poten				_ (NTU)
		G	ENERAL II	NFORMATION		
WEATHER SU	JN/CLEAR	_ OVERCAST/RA	IN	WIND DIRECTIO	N AM	IBIENT TEMPERATURE
1		HAND DELIVER				
ŀ	TL- Chic		<del></del>			_
COMMENTS		7				
	NHade				V 1.001	
SAMPLER				OBSERVER.	J. Wal	<u> </u>
<b>L</b>	AATRIX TYPE CO			D DAM 55	SAMPLING ME	ETHOD CODES
DC=DRILL CUTT		SL=SLUDGE		B=BAILER	113.4D	G=GRAB
WG=GROUND W		SO=SOIL		BP=BLADDER PI		HA=HAND AUGER
SH=HAZARDOU	S LIQUID WASTE		A TED	BR=BRASS RING CS=COMPOSITE		H=HOLLOW STEM AUGER
SE=SEDIMENT	3 30LID WASIE	WS=SURFACE W/ SW=SWAB/WIPE	TIEK		S FLIGHT AUGER	HP=HYDRO PUNCH SS=SPLIT SPOON
GL-GLDUVIEN I		OH -OH ABI WIFE		DT=DRIVEN TU		SP=SUBMERSIBLE PUMP



OCATION: NAS Fort Worth	1 JRB	PROJECT NAME AO	C 1	
SITE: AOC 1		PROJECT NAME AF	C001-16BBD	
	SAMP	LE INFORMATION		
SAMPLE ID MW-11WG		DATE: 4.17.00	TIME-	0927
MATRIX TYPE: WG		ENTER SAMPLE N	JMBERS FOR OC	SAMPLES/
SAMPLING METHOD: 60	o flow	BLANKS ASSOCIAT	-	
LOT CONTROL #: O 1 1	A	MATRIX SPIKE (MS	5)	
(Ambient Blank # - Equipment Blank # -	Trip Blank # - Cooler #)	MATRIX SPIKE DU	P (SD)	_
CHAIN-OF-CUSTODY #:		FIELD DUP (FD).	DUPOS	
		AMBIENT BLANK (	(AB)	
SAMPLE BEG DEPTH (FT)	A	i	К (EB). <b>ЕВОЧІ</b> Т	100
SAMPLE END DEPTH (FT)		TRIP BLANK (TB).	_	<u> </u>
GRAB (V) COMPOSITE ( )				
CONTAINER PRES	ERVATIVE/	ANALYTICAL	AN.	ALYSIS
<del></del>	PARATION	METHOD		_
40 mL VOA 3 Cool to 4	C/HCl to pH < 2	SW8260B	\	VOCs
	<del></del>			
<u> </u>		LE OBSERVATIONS		
PID READINGS	<del>.</del>	CHARACTERISTICS	M	ISCELLANEOUS
	LOR clear	<del></del>	<del></del>	
<del></del>	OR <u>no re</u> HER	<u> </u>		
pH 6.97 Temperature		d Oxygen 2.10 (mg/L)	Succession Conductivity	996 (umbos/cm)
Iron (mg/L) Oxidati				
		RAL INFORMATION	`	
WEATHER SUN/CLEAR			A MADIENT TO	NORTH STOR
				EMPERATURE _ 30 1_
SHIPMENT VIA FEDEXx	HAND DELIVER	COURIEROTHER	<del></del>	
SHIPPED TO STL - Chica	<u>ago</u>			
COMMENTS	<u>-</u>		<u>-</u>	
SAMPLER Jwas	Jaa	OBSERVER.	V Hade	
MATRIX TYPE CO	DES	SA	MPLING METHOD C	ODES
DC=DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=0	GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=	HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H≃F	HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAMP	LE HP=	HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIG	HT AUGER SS=	SPLIT SPOON
<b>\</b>		DT=DRIVEN TUBE	SP=	SUBMERSIBLE PUMP

AFCEE FORM SR.11



CATION: NAS Fort Worth	JRB	PROJECT NAME. AC	DC 1
SITE: FROID HOW	<u> </u>	PROJECT NAME: AF	FC001-16BBD
	SAMPLI	E INFORMATION	
SAMPLE ID EB041200		DATE: 4-12-0	00 TIME: 1045
MATRIX TYPE: WG		ENTER SAMPLE N	UMBERS FOR QC SAMPLES/
SAMPLING METHOD: 💪		1	TED WITH THIS SAMPLE.
LOT CONTROL #: O \	4	MATRIX SPIKE (M	(S)
(Ambient Blank # - Equipment Blank # - '	Γrip Blank # - Cooler #)	MATRIX SPIKE DU	JP (SD)
CHAIN-OF-CUSTODY #:		FIELD DUP (FD)	
	<u></u>	AMBIENT BLANK	(AB)
SAMPLE BEG DEPTH (FT)		EQUIPMENT BLAN	NK (EB)
SAMPLE END DEPTH (FT)		1	TB041200
GRAB ( COMPOSITE ( )			
CONTAINER PRES	ERVATIVE/	ANALYTICAL	ANALYSIS
<del>-                                    </del>	PARATION	METHOD	
40 mL VOA 3 Cool to 4	C/HCl to pH < 2	SW8260B	VOCs
	NOTABLI	E OBSERVATIONS	
PID READINGS	SAMPLE	CHARACTERISTICS	MISCELLANEOUS
	LOR ( lear		
	OR Nanc HER —		
<del></del>		Ovugan — (mg/L)	Specific Conductivity(umhos/cm)
Iron (mg/L) Oxidati			(N10)
		AL INFORMATION	100
WEATHER SUN/CLEAR	_ OVERCAST/RAIN	WIND DIRECTION	AMBIENT TEMPERATURE 60°
SHIPMENT VIA. FEDEXx	HAND DELIVER	COURIEROTHE	R
SHIPPED TO. STL - ( . \A) ( WC)	<u></u>		
COMMENTS			
SAMPLER WHATE		OBSERVER 5.	Stanford
MATRIX TYPE CO	DES	SA	AMPLING METHOD CODES
DC = DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G = GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER	CS=COMPOSITE SAM	IPLE HP=HYDRO PUNCH
SE=SEDIMENT	SW = SWAB/WIPE	C=CONTINUOUS FLIC	
		DT = DRIVEN TUBE	SP=SUBMERSIBLE PUMP



LUCATION: NAS Fort Work	h JRB	PROJECT NAME AC	DC 1
SITE: AOC 1		PROJECT NAME AF	C001-16BBD
02	1WG01 SAM	IPLE INFORMATION	
SAMPLE ID WHGLTAQ		DATE: 5-16-1	DD TIME: 1100
MATRIX TYPE: WG		ENTER SAMPLE N	UMBERS FOR QC SAMPLES/
SAMPLING METHOD: BP			TED WITH THIS SAMPLE:
LOT CONTROL #: U   1		MATRIX SPIKE (M	s)·
(Ambient Blank # - Equipment Blank # -	<u> </u>	MATRIX SPIKE DU	IP (SD)
CHAIN-OF-CUSTODY #.		FIELD DUP (FD)	_ <del>_</del>
		AMBIENT BLANK	
SAMPLE BEG DEPTH (FT) -		ł.	IK (EB) EBUSILO
SAMPLE END DEPTH (FT)			TB051600
GRAB ( COMPOSITE ( )		TRIP BLANK (IB)	113037600
CONTAINER PRES	ERVATIVE/	ANALYTICAL	ANALYSIS
<del></del>	PARATION	METHOD	
	C/HCl to pH < 2	SW8260B	VOCs
1L Amber 2 C	ool to 4C	SW8310	PAHs
40 ml VOA 3 Cool to	4C/HCL pH < 2	TX1005	ТРН
	NOTA	BLE OBSERVATIONS	
PID READINGS	· · · · · · · · · · · · · · · · · · ·	PLE CHARACTERISTICS	MISCELLANEOUS
1st 1160 ppmat wellhase		20.000.012.000.000	
2nd OD	OR Niche		
	HER		
		ved Oxygen $5.40$ (mg/L)	
Iron(mg/L) Oxidate	on/Reduction Potential	<u>-6.2.5 (mv) Turbidity</u>	<u>40 8</u> (ntu)
		ERAL INFORMATION	
WEATHER SUN/CLEAR	OVERCAST/RAIN _	WIND DIRECTION	AMBIENT TEMPERATURE SOC
SHIPMENT VIA FEDEXx		COURIER OTHER	<u> </u>
SHIPPED TO. STL - CINCA	yo		
COMMENTS	, 		
SAMPLER J. Wallace		OBSERVER	Oilliams
MATRIX TYPE CO	DES	SA	MPLING METHOD CODES
DC = DRILL CUTTINGS	SL=SLUDGE	B=BAILER	G=GRAB
WG=GROUND WATER	SO=SOIL	BP=BLADDER PUMP	HA=HAND AUGER
LH=HAZARDOUS LIQUID WASTE	GS=SOIL GAS	BR=BRASS RING	H=HOLLOW STEM AUGER
SH=HAZARDOUS SOLID WASTE	WS=SURFACE WATER		PLE HP=HYDRO PUNCH
SE=SEDIMENT	SW=SWAB/WIPE	C=CONTINUOUS FLIG	
(		DT=DRIVEN TUBE	SP=SUBMERSIBLE PUMP

# APPENDIX A.3 LABORATORY CHAIN-OF-CUSTODY'S

		Report To:		Bill To:		Shaded Areas For Interni
· Po		Contact f.	· · ·	Contact		Lab Lot # 代れで 7とし 、
	olicerling	Company		Сотралу		Package Sealed Samples Sealed
		Address //		Address		Sample
Chicago Laboratory かも、CoC 2417 Bond Street		Phone		Phone		(Yes) No
University Park, IL 60466 El		Fax	//,	Fax		Temperature °C of Cooler
		E-Mail /// 175	1 1961 100.	PO4	Onote:	7
	Signature		Refrg#			Within Hold Time   Presery, indicated
7.3	1,11	, , , ,	#/ Cont. / /			
1.	Project Number		7 7.4			pH Check ok Res. Cl. Check-ok
1. 111.1.	_	17.2	Preserv 1			ž
, , , ,	Date Required	, , , , , , , , , , , , , , , , , , ,	( * ; 7 "			Sample Labels and COC Agree
-	<u> </u>	Fax // /		<u>-</u>		Yes No COC not present
Samp	Client Sample ID	Sampling Date Time	gmoO			Additional Analyses / Remarks
			· .			
11.12. 21.11		11.14	<b>~</b> -			
1. Jehn	1 2 P	}—				
11. P. V.	2	11/1/62 1300	,			
156'AV V. 1	51.7.15	Obo volitu	:			
1714		7.77	,			
ं नाम्ब		1 1 a	~			
1201	-	DATE	TIME	RECEIVED BY	The company	ULIOO ONE
4 I	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	
Matrix Key SE = Sedment SO = Sold DS = Drum Sold DN = Drum Idrud		Container Key Plastic VOA Val Stenier Plastic Amber Classes	Preservative Key HCI Cool to 4* H2SO4 Cool to 4* HN03, Cool to 4* NAOH Cool to 4*	COMMENTS	635 106	Date Received 11 / 2 / 60 Courier FX Hand Delivered
L = Leachate WI = Wipe	- n w	<u> </u>	NaOHZA Acetate, Cool to 4*			Bill of Lading See affects
	-    		None			ST ON (CHI) Leader of the state

STL Chicago Chain of Custooy CHI 22 09 231/A 5/89 Preserv. indicated (Yes) No No NA Res. Cl<sub>2</sub> Checkek. Yes No (NA. ₹ Samples Sealed Yes (No) ó ි ද Samples Intact Additional Analyses / Remarks 11ME 5'0 Hand Delivered COC not present Bill of Lading Soil attach Lab Lot # 94116 926 Sample Labels and COC Agree of Cooler Shaded Areas For Internal Use Only 042 M ပွ Within Hold Time Couner 及 Received on Ice Date Received. Package Sealed (Yes ) No Temperature pH Check ok ž (S) COMPANY COMPANY Charles of Breeze 635 Quote RECEIVED BY DA RE-EIVED COMMENTS Company Address Bill To: Contact Fax ₫ H2SO4, Cool to 4"
HNO3, Cool to 4"
NaOH, Cool to 4"
NaOHZA Acetate, Cool to 4"
Cool to 4" Preservative Key ... (30100117) 1313 (6315V HCI Cool to 4. ŦME TIME Comp/Grab #/ Conf. Volume Refrg # Preserv Matrix Sampling Date Time DATE VOA Vial Stenie Plastic Amber Glass Widemouth Glass Other Container Key 77: Date 1-44 1. WAL Report To: Contact Company Plastic Address The Transfer Phone E-Mail Project Number Hard Copy 첉 Fax Date Required **- 2646** Signature つつなし、ふこ Sample ID Matnx Key
SE × Sedment
SC >> Solid
DS = Drum Liquid
L = Leachale
Wi = Wipe 17-1-1 University Park, II. 60466 Phone: 708-534-5200 Fax. 708-534-5211 Chicago Laboratory Committed To Your Success 1, 1, 1, asw-sy 2417 Bond Street SL = Sludge MS = Miscellaneous OL = Oil WW = Wastewater W = Water S = Soil Project Location Sampler Name. REL NOUISHED BY RELINQUISHED BY Project Name. Lab PM Laboratory 800 ا ا د Ω

Report To:
HECEE (LP) Address //
Chicago Laboratory L. Coc
EDD Fax // // // // // //
Signature Refrg #
Volume Volume
Date Required
)           
Client Sampling & E .
(1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3 11/1/10 16 - 6
Water 15 11/12 11 2 11 1 2 2 1 2 2 2 2 2 2 2 2 2
1 Oto vaju
2 1 276/ 11 215/10 11/10
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COMPANY DATE TIME
Key         Container Key         Preservative Key           SE = Sedment         1 Plastic         1 HCl. Cool to 4*           SO ≈ Solid         2 VOA Vial         2 H2SO4 Cool to 4*           DS = Drum Solid         3 Stente Plastic         3 HNO3*, Cool to 4*           DL = Drum Liquid         4 Amber Glass         4 NaOH, Cool to 4*           VM = Wipe         6 Other         6 Cool to 4*           O ≈         7 None

Res. Cl. Checkek Yes No (NA Presery. indicated Yes No NA Samples Sealed Yes (No) 7,8 Samples Intact Additional Analyses / Remarks ™54SV Hand Delivered COC not present 26 3∥₩ 84 mg 426 Sample Labels and COC Agree of Cooler Shaded Areas For Internal Use Only 09/2/11/0 Bill of Lading See Temperature °C Within Hold Time Courier R Package Sealed (Yes) No Received on Ice Date Received pH Check ok Yes) No 100 - 100 20 100 00 00 00 00 STL COMPANY Quote RECEIVED IN M C RE-EIVED OF COMMENTS Company Contact Address Phone Fax ₹ 2 H2SO4, Cool to 4"
3 HNO3, Cool to 4"
3 NAOH, Cool to 4"
5 NAOH/Ch Acetate, Cool to 4"
5 Cool to 4" TIME . Preservative Key .:. HCI, Cool to 4" Votume Comp/Grab Refrg # -Preserv #/ Cont. DATE , Sampling Date Time ᆵ VOA Vial Stenle Plastic Amber Glass Widemouth Glass Other Container Key : Report To: Project Number Company Address Plastic Contact Phone ~ " " " " " " " " . E-Mail Fax Hard Copy Ę Date Required 202450 Signature 5410 14 7 We C Sample ID Client SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe University Park, IL 60466 Phone 708-534-5200 Fax 708-534-5211 Committed To Your Six cess Matrix Key Chicago Laboratory ソソル, リニュナ 1,000 100 2417 Bond Street OSW-SM W = Water
S = Soul
SL = Siudge
MS = Miscellaneous
OL = Oil Project Location Sampler Name. RELINGUISHED BY WW = Wastewater RELINQUISHED BY Project Name Laboratory 800 Lab PM Ω

**635 109** 

<	e See See	Received on los Samples Intac		Tumperature C of Cooler	Within Wold Time   Present, Indic	1	Yes No (NA) Yes No	Sample Labels and COC Agree	Additional Analyses / Remark									DATE TIME / 2	DATE TIME	are in cooler with Fell EXT 8 144 2175 9	Courier And Delivere	1 8	S1t Chicago Chain of Custody CHI 22:09:2
	Ch	(Same)			Quote							•							RECENTION COMPANY	COMMENTS ALT (VOCS ARE IN COM	Samples Associated with VOCS	AFC DO	635
COL TIME	ydrograp Logic, 100 company	Herndon Pkwy,	حرا	0811-1180	DOCHAL CON	*Con 37 20 21		x dene	Matri Comp/c N/0 C S N/0 C S N	12	633	<b>₽</b> м	1700 W G 3 3 2	>	>				5/16/00 TIME (8/0	Preservative Key	1 HCl. Cool to 4" 2 H2SO4 Cool to 4"	5 NaOH, Cool to 4" 5 NaOH/Zn Acetale, Cool to 4" 6 Cool to 4"	, ryang
Report 10:		O Lille Chill	ી⊬	Ä	E-Mari acamade	19. Milala	A FIGURE	Date Required / / /	ient Sampl	TA037 5-16-00	TA 036 6-16-00		EB051600A 5-1600 1700						Sommer of the sol ogic on the solid	Container Kev	Sediment 1 Pil	Drum Liquid 4 Leachate 5 Wipe 6	_
		o Your Success	Chicago Laboratory	2417 Bond Street University Park, IL 60466 Phone 708-534-5200	Fax 708-534-5211	Jenifer Walland	Project Name: Skin	Project Location JOCHN JRB	Laboratory Sp Col	MHC1			MV E80						ELYCONOMIC BY WELLY CONTROL BY	Matrix Kev	W = Wastewater	= Soil L = Studge S = Miscellaneous L = Oil	A = Air O =

011 659

Lab Lot # 94 (15 53) Package Seaper 2 Samples Booked Temperature oc of Cooler	WithHis Hold Time Present Indicate Yes No Yes No No Yes No (No Yes No (No No N	Sample Labels and COC Agree  Yes No COC not present  Additional Analyses / Remarks			J. SONTE MITTER DATE DATE DATE DATE DATE DATE DATE DATE	<del>( 3</del>
2×2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Refrg #  #/ Cont Volume Apr 40r 40r 40rd 40rd 40rd	Comp/Grab  131,5/2/2  131,5/2/2  131,5/2/2  131,5/2/2  131,5/2/2  131,5/2/2  131,5/2/2	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Preservative Key COMINIENTS. T.C. A Distinted my AFCOULT H2SO4 Cool to 4. H2SO4 Cool to 4. HN03. Cool to 4. NaCH, Cool to 4. Cool to 4. Nach Accesses. Cool to 4. A MARCO CO2 & DISSIAN None
AFCEE Company Hydes Geo. CLP-Lille Address 1155 House CLP-Lille Address 1155 House TATOS Harveston To 1871 House TATOS Harveston To 1871 House	Signature  Signature  L. 4 D  Project Number  10880  9.23.31	Sample ID  Date Required  (0, 13, 00  Fax. // /  Sampling  Date Time	WHGLTA 028-03 5/11/6, 901 5 WHGLTA 028.01 4 641 5 WHGLTA 028.27 TRIP BCANK-05/11/6.04	12462703646-01 150 W	COMPANY DATE SAME SAME	Matrix Key  SE = Sediment 1 Pleatic 1  SO = Solid 2 VOA Val  DS = Drum Solid 3 Sterile Pleatic 3  DL = Drum Liquid 4 Amber Glass 4  L = Leachsie 5 Widemouth Glass 6  W = Wije 6 Other 7
Conmitted To Your Success Conmitted To Your Success 2417 Bond Street University Park, IL, 60466 Phone: 708-534-5200	Sampler Name K.Dure Project Name	Project Location  A.A. F. Lab P.M.  Laboratory  1D	M	200	RELINGUISHED BY	WWW = Westewater W = Water S = Sod St = Shudge NS = Nisoclaneous OL = Oll A = Air

٠. .

Lab Lot # 4 H / C   C    Received on Ice Yes No Yes	Wathin Hold Time Presery. Indicated Yes No Yes No NA Yes No COC Agree Yes No COC not present	Additional Analyses / Remarks	Date Received U 13 60  Courier. Fed T Hand Delivered  Bill of Lading SEL WHalfled
To: Chris (amp  Beny (Same)  Beny (Same)	epon and a second		RECEIVED BY COMPANY COMMENTS  635 112
1100 Herod		<del></del>	Container Key Preservative Key 1 HCI. Cool to 4* 3 HX03. Cool to 4* 3 HX03. Cool to 4* 5 NaOH. Cool to 4* 5 NaOH. Cool to 4* 6 Cool to 4* 7 None
AFCEE CLP LIFE That Coc.	Signature Signature Froject Number AFC OC AF	Client Sample 1D TB 0412 00 SAV - 2 WG 11 BGS MW06 WG 11 ESCH 1200	SE Sediment 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Commuted To Your Success  Chicago Laboratory 2417 Bond Street University Park, 11. 60466 Phone: 708-534-5200 Fax 708-534-5211	Sampler Name:  (Aetherine Williams)  Project Name:  AOC 1 Investigation  NASSEW TRB, Texas  Lab PM Donne Ingerso	DO 000 000 000 000 000 000 000 000 000 0	N WW = Wastewater W = Soll St. = Sinde MS = Miscellaneous OL = Oil

11 55 70 541/A 5/89 ô Presery. Indicated ₹ Res. Cl. Check ok Yes No (NA 1600 Hand Delivered Samples Saaled Additional Analyses / Remarks Samples Intact Yes (No) õ COC not present Lab Lot# 94046823 Yes (No <u>⊘</u> Sample Labels and COC Agree of Cooler Bill of Lading' Sec & Shaded Areas For Internal Use Only 2.3)(3.1) DATE 8-00 Ž Within Hold Time Date Received Courser FX Package Sealed Received on Ice Temperature pH Check ok Yes No / (Yes) No 옷 (Yes) No Yes 173041700 est project AFC. 001- 356BC, COMPANY 635 113 amp EB0417003 Associated w Sand Quote COMMENTS. RECEIVED BY RECEIVED BY Company Address Contact BII 70 Phone Ä \$ HCI, Cool to 4"
H2SO4 Cool to 4"
I HNO2. Cool to 4"
I NaCH, Cool to 4"
S NaCH, Cool to 4"
Cool to 4" Herndon 1/12017 Preservative Key 583 Herndon Pkww 1000 THE OO <u>, 20V,</u> 209589 Š  $\mathcal{O}$ 0814-174-EOF 3 478-5186 Comp/Grab Volume or a Preserv #/Cont. 00(260 41700 HE 700 Matrix ecamo@ 4.17 00 10927 4.17.00 1200 Sampling Date Time 5,16,00 AFC-001-1688D Container Key 703-Amber Glass Widemouth Glass Swite 900 VOA Vial Sterile Plastic 1): Report To: Had Bulsen we Company Address Date Required Hard Copy Phone E-Wall Ę. Project Number 上してしてき Ä Signature Sample ID Matrix Key
SE = Sediment
SO = Solid
DS = Drum Solid
CD = Chum Liquid 1507-3E M. COC Cient 四日 W IDE His fee true of the JRB DEGOA TOUSON 1200 S an nylyz Lyllace hicago Laboratory Diente Hode iversity Park, 1L 60466 mmitted To Your Success ione. 708-534-5200 x 708-534-5211 Waste.

= Water
= Soil

L = Soludge
|S = Miscellaneous
= Oil 17 Bond Street .OC 1 mpler Name oject Name: 700 00 ₽

S PM

Res. Cl. Check ok Yes No (IA) STL Chicago Chain of Custody CHI 22-09-23 (A.-5/99 Presery. Indicated (Yes) No NA BASPB ଚ୍ Samples Sealed Yes (No). Samples Intact (Yes) No Additional Analyses / Remarks ō Hand Delivered Bill of Leading See attach COC not present Sample Labels and COC Agree of Cooler Shaded Areas For Internal Use Only Lab Lot # 9AII 00 N ∢ Z Within Hold Time Received on Ice Date Received Package Sealed Course TY PH.Check ok Temperature 울 (Kes) 635 RECEIVE COMMENTS RECEIVED Company ë Address Contact Phone ă Š ᆜ 2 H2SO4, Cool to 4"
3 HNO3, Cool to 4"
4 NaOH, Cool to 4"
5 NaOHZn Acetate, Cool to 4"
5 Cool to 4" とう ことずる バイメイナン ત Preservative Key - 4/80 Ø ત Comp/Grab Volume #/ Conf. Preserv Refrg # *((,*€/′′′ 3 11/2/00 1536 W 4444 24.5 1.12)00 1206 0211 00 1170 [MITCHERS FAVOR: 3MS]-140: 1120 ०१५। ००(न)ः 2835 112 pc 0832 (1/2) No 1/2) 11/20 1/200 4FC031-16BB Sampling Date Time 7 (389) LAM DATE VOA Vial Sterle Plastic Amber Glass Widemouth Glass Other Container Key 11/5/10 Date Kit Jun 11.10 Report To: Phone Company \_ Pastic Cortaci E-Mail ¥ | をようしてもしょうないのかの NHG LAO NO CUROLS Project Number ă Hard Copy" 20 4 50 6 WHGLTA037WFC13 WITCTADHAMEOI WITTHANDANGO BGSM WISWIRE Signature Matrix Key
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = 16110200 Sample ID Client MW-5 W/5-13 &DD EB1102cc いのいこ ごこここ ゆりょく 11.31.303 University Park, IL. 60466 Phone: 708-534-5200 Fax. 708-534-5211 Chicago Laboratory Committed To Vour Success KENT JUNIN W = Water
S = Soul
SL = Studge
MS = Macellaneous
OL = ON 2417 Bond Street QSW-SY WW = Wastewater Project Location ELINOUISHED BY Sampler Name. Project Name 400 005 900 200 Laboratory 003 OOR 50 8 ₽ Lab PM

WW = Wastewater SE = Sediment SO = Solid S = Solid SL = Sludge DL = Drum Liquid AS = Miscr rus Wi = Wipe A = Arr O = Matrix Key	RETWONISHED BY WILLIAM COMPANY		╼╁╼╁╼╉	Project Location:  NASEN TRB, Texas Hard Copy:  Lab PM:  Laboratory 2 Client  ID 2 Sample ID	Land Point Park, IL 60466  Phone. 708-534-5200  Fax 708-534-5211  Sampler Name.  Nicele Hade  Project Name  ACC 1 Investigation AFC-001.	SII SE9
Container Key Plastic VCA VIal Sterile Plastic Amber Glass Widemouth Glass Other 7	COMPANY COLOR DO SOLIC A / 11/00	<del>                                     </del>	4.11.00 1525 W	Sampling Date Time	Imorgan (a) Rest  1688D Pres	Hydrogeal Hydrogeal 1155 Hemda 1153-478-
Preservative Key HCI, Cool to 4* H2SO4, Cool to 4* HNO3, Cool to 4* HNO4, Cool to 4* NaOHZD Acetate, ^ 'to 4* Cool to 4* NaOHZD Acetate, ^ 'to 4* NaOHZD Acetate, ^ 'to 4*	DO TIME 1700 RECEIV		6 6 6	Comp/Grab JOCs (8260B)	100 Fax 100 Post 100	6.5
THOULING OF PROJUEBOULING OF PROJUEBOULINGO 33DBA					Quote	Chris Camp (Same)
A . Da				Additional Ar	Whatin Hold Time Preserv. Inc.  Ves No  PH Check ok  No  Pes No  Pes No  Sample Labels and COC Agree	Lab Lot # 7 Samples Paging Sealed Yes Regived on ice Samples Removes No Temperature of cool
H. J.C.	-00 144500 TIME			Additional Analyses / Remarks	Preserv. Indicates Yes No No Yes No No COC Agree	Samples Sealed Yes No Samples Intact Yes No

STI. Chicago Cham of C	the state	None		0 =	> 1
	mord t	3, Cool to 4" 1, Cool to 4" 1/Zn Acetate, Cool to 4" 1/o 4"	3 Sterile Plastic 4 Amber Glass 5 Widemouth Glass 6 Other	DS = Drum Solid DL = Drum Laquid L = Leachate WI = Wipe	U St = Studge  MS = Miscellaneous
10111 2017	COMMENTS ON ( VOCS are included with	<u>.</u>	Container Key 1 Plastic 2 VOA Vial		1
	RICEINED BY	TIME	DATE	COMI	RELINGUISHED BY
	RECEIVED MAN JANT	0/8/ amm (0/41/5	JUNTO POIC DATE	CIVILLY COMPANY	RELADINSHED BY
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		W 9 3 3\2	5-16-00 1100	WHGLTA037	001
		Com VOC: SW8	Sampling Date Time	Client Sample ID	Laboratory
		5 260			Lab PM Donna
		rab B	Sopy 6, 13,00	NAS FOR WORLD TRB Date Required Hard Copy.	Project Location
		12	01 16 885	Groundwater "AFC OO!	ACC 1 6
L_		Volume York Con I's	Ç	로 로	Project Name
		Refig# 15 5/0 5	of a land	Sampler Name. Signature	Sampler Name.
	PO# Quote	$\alpha_0$	E-Mail CCampo	4-5211 K	Fax 708-50
ŀ	Fex	11-4180	-5	ry Park, IL 60466	_
1 !	Phone		703-4:	aboratory Tri Coc	Chicago Laboratory 2417 Bond Street
		8	1,000 Hins.		
	Address (Same)	dun Pkwy,	Address 1155 H		Commuted To Your Success
- 1	contact CILIS (BIM)	pair Thr	Hudra	タナノケル 量量	
1	BIII To:			635 116	

ICEE / CLP LIKE

1 ah Lot # 74046822 Shaded Areas For Internal Use On 9A046833

DATE 18 CC 1600 TIME DATE CUT: FI CC 1834 CUT: FI CC 1834  Courier FX Hand Delivered Bill of Lading SER Attuch Ch	RECEIVED BY COMPANY STL STORY STL STORY STL STORY STL STORY STL	TIME STOOL TIME STOOL TIME STOOL STO	COMPANY COLO LOCK  DATE OMPANY COLO LOCK  DATE OF 1 H COMPANY  1 Plastic 2 VOA Vial 3 Sterile Plastic 4 H 2 H 3 Sterile Plastic 5 Widemouth Glass 6 Other	ELINOUISHED BY  CI I X'14 WAS  Matrix Key  W = Wastewater  SE = Sediment  SE = Sediment  Drum Liquid  S = Studge  C = Leachate  VI = V/ire
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		رو ب	9511 00.41.4 409m	003 MHGLTAGOSWGDY
		2	WHELLA DOWGOYMSD TITUO 163	X MHGLI R TOSMEOVI
		) J. J.	WHGLTA903WGOHMS 4.17.00 1639	×
		- V	1604 417-00-1639	002 X WHGLTA903WGOH
Additional Analyses / Remarks	(601	Comp	Sampling Date Time	boratory SO Client Sample ID
(Yes) No COC not present		(Grab	Date Required 5 16 00 Hard Copy Fax.	Worth JAB
is and		Preserv 1 6 3	AFC-001-33CBC	RFELANDEI
		2 4	Pail Whole	cole Hade
	PO# Quote	hal-Corp	Signature Cumpa	4-5211
ا ۳۰پ	Phone	4180	Prone 703-471-41	ricago Laboratory 7 Bond Street versity Park, IL 60466
Received on Ice Samples intact		100, VA20170	Suite (100) Her	numited To Your Success
TE 1	Company Compa		company Hydro (70	- 
2793404 # 7A046820	77,00		Report To:	

#### **APPENDIX A.4**

### BORING LOGS AND WELL CONSTRUCTION DIAGRAMS



Project No: AFC001-16BBC
Project: NAS Fort Worth JRB

**Client: AFCEE** 

Location: AOC-1 (Off Base)

Northing: 6966001.7

Borehole ID: WHAGLTA036

Date: 5/9/00

Geologist: Brad Nielson

**Ground Surface Elevation:** 555.45

Easting: 2300458.39

		SUBSURFACE PROFILE		-		SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
	_	Topsoil	-1		100%	Moist	0.0	
2		Clayey Silt Clayey SILT, moderate plasticity, firm, moist, trace of gravel, 10YR 5/3 Brown, moderately sorted	-2		100%	WIOIS	0.0	
3		Clayey Silt Clayey SILT with some gravel and sand, low plasticity, firm, dry, 10YR 5/3 Brown, moderately sorted			100%	Dry	00	
4		Clayey Silt Clayey SILT with some sand low	-4					
5		plasticity, loose, damp, 10YR 3/3 Dark Brown, well sorted			100%	Damp	0.0	
6		Sandy Silt Sandy SILT with trace of gravel, low	-6					
7	-	Sandy SILT with trace of gravel, low plasticity, firm, damp, 10YR 6/4 Light Yellowish Brown, well sorted			100%	Damp	0.0	Bottom 6" is 10YR 5/1
8	- - - - - -	Sandy Clayey Silt Sandy Clayey SILT with trace of	-8		ii			Gray
9		Sandy Clayey Silt Sandy Clayey SILT with trace of gravel, moderate to low plasticity, firm, moist, 10YR 4/1 Dark Gray, well sorted			100%	Moist	00	Gravel is rounded limestone
10			-10					

Drilled By: GPI

Drill Method: Splitspoon
Drilling Equipment: B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 10"

Total Depth Drilled: 24'

Sheet: 1 of 3



Project: NAS Fort Worth JRB

**Client: AFCEE** 

Location: AOC-1 (Off Base)

Northing: 6966001.7

Borehole ID: WHAGLTA036

Date: 5/9/00

Geologist: Brad Nielson

**Ground Surface Elevation: 555.45** 

Easting: 2300458.39

		SUBSURFACE PROFILE			5	SAMPI	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
11-	<i>\\</i>	Silty Clayey Sand Silty Clayey SAND, moderate plasticity, firm, well sorted, wet, 10YR 4/1 Dark Gray	-12		100%	Wet	0.0	Likely dredge or fill material from river construction. Root and wood debris
12-		Same as above Wet to saturated			100%	Wet	00	Root and wood debris
14-		Same as above Saturated	-14					Trace odor Root and wood debris Some dark staining
15-	نیسر مسار		-16	-	100%	Satur ated	0.0	
17-	<i>*</i>	Same as above			100%	Satur ated	0.0	
18-		Silty Clay Silty CLAY with trace of sand, moderate to high plasticity, firm to stiff, well sorted, saturated to wet, 10YR 5/4 Yellowish Brown	-18		100%	Satur	0.0	Increase in clay at 19'
20-			-20			ated	"	, , , , , , , , , , , , , , , , , , ,

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment: B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 10"

Total Depth Drilled: 24'

Sheet: 2 of 3



Project: NAS Fort Worth JRB

Client: AFCEE

Location: AOC-1 (Off Base)

Northing: 6966001.7

Borehole ID: WHAGLTA036

Date: 5/9/00

Geologist: Brad Nielson

**Ground Surface Elevation: 555.45** 

Easting: 2300458.39

<u></u>								
	<del>,     </del>	SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІО (ррт)	Remarks
21-		Sandy Clay Sandy CLAY, high plasticity, stiff, well sorted, moist, 7.5YR 5/6 Strong Brown	-22		100%	Moist	0.0	
22-		Clayey Sand Clayey SAND, moderate plasticity, firm, well sorted, wet, 10YR 5/4 Yellowish Brown	-24		100%	Wet	0.0	
25-								Total depth 24' Water level measured after 15 minutes at 17.0' below ground surface
26- 27-								
28-								
29-								

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment: B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (7,03) 478-5186 FAX (703) 471-4180

Hole Size: 10"

Total Depth Drilled: 24'

Sheet: 3 of 3



Project: NAS Fort Worth JRB

Client: AFCEE

Location: AOC-1 (Off Base)

Northing: 6965905.87

Borehöle ID: WHGLTA037

Date: 5/9/00

Geologist: Brad Nielson

**Ground Surface Elevation: 556.08** 

Easting: 2300596.51

		SUBSURFACE PROFILE			9	SAMPI	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІО (ррт)	Remarks
		Topsoil Grassy topsoil	-1					
1-		Sandy Clayey Silt Sandy Clayey SILT, moderate plasticity, moderately sorted, dry, 10YR 5/4 Yellowish Brown	-2		100%	Dry	0.0	
3-		Sandy Clayey Silt Sandy Clayey SILT, moderately to poorly sorted. firm, dry, trace of gravel, moderate plasticity, 10YR 5/4 Yellowish Brown			100%	Dry	0.0	Less clay
4-		Sandy Silt Sandy SILT, low plasticity, well sorted, firm, dry, 10YR 4/3 Brown	-4					
5.			-6		100%	Dry	0.0	Very fine sands
7-		Silt SILT with some fine sand, low plasticity, well sorted, loose, damp, 10YR 4/3 Brown			40%	Damp	0.0	Less sand
9.		Sandy Silt Sandy SILT with some clay, low to moderate plasticity, well sorted, firm, damp 10YR 4/3 Brown	-8		100%	Damp	0.0	Trace of roots and metallic debris
10			-10	_				

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment. B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 10"

Total Depth Drilled: 24

Sheet: 1 of 3



Project No: AFC001-16BBC
Project: NAS Fort Worth JRB

Client: AFCEE

Location: AOC-1 (Off Base)

Northing: 6965905.87

Borehole ID: WHGLTA037

Date: 5/9/00

Geologist: Brad Nielson

Ground Surface Elevation: 556.08

Easting: 2300596 51

		SUBSURFACE PROFILE			5	SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
11-	H H	Silty Clay Silty CLAY, stiff, high plasticity, well sorted, moist, 10YR 4/4 Dark Yellowish Brown			100%	Moist	0.0	Orange staining in soil
12-	#	Same as above	-12					
13-		Sand SAND, fine grained, loose, wet, well sorted, 10YR 6/3 Pale Brown	-13		100%	Wet	216	Moderate odor
14-		Same as above	-14					
15-		Clayey Silty Sand Clayey Silty SAND, moderate plasticity, firm, saturated, well sorted, 10YR 6/3 Pale Brown	-15 -16		100%	Satur ated	186	Stronger odor Increase in silt and clay from 15.5'-16.0'
16-		Silty Sand with Clay Silty SAND with clay, low plasticity, firm, saturated, moderately sorted, 10YR 6/3 Pale Brown	-18		100%	Satur ated	350	Strong odor
19-		Silty Clayey Sand Silty Clayey SAND, moderate plasticity, firm to loose, saturated, moderately sorted 10YR 6/3 Pale Brown	-20		100%	Satur ated	1914	Strong odor

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment: B-61

HydroGeoLogic, Inc. 1155 Hemdon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 10"

Total Depth Drilled: 24

Sheet: 2 of 3



Project No: AFC001-16BBC
Project: NAS Fort Worth JRB

**Client: AFCEE** 

Location: AOC-1 (Off Base)

Northing: 6965905.87

Borehole ID: WHGLTA037

Date: 5/9/00

Geologist: Brad Nielson

**Ground Surface Elevation: 556 08** 

Easting: 2300596 51

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
21-		Silty Sand Silty SAND, loose, well sorted, saturated, 10YR 6/3 Pale Brown	-22			Satur ated	1936	Sand is very fine Strong odor
23-	#   #   #	Silty Clay Silty CLAY, moist, well sorted, high plasticity, firm to stiff, 10YR 3/1 Very Dark Gray	-24	·		Moist	51.3	
25-								Total depth = 24'
26- - - - - 27-								
28-						:		

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment: B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 10"

Total Depth Drilled: 24

Sheet 3 of 3



Project: NAS Fort Worth JRB

Client: AFCEE

Location: AOC-1 (Off Base)

Northing: 6965829.45

Borehole ID: WHGLTA038

Date: 5/10/00

Geologist: Brad Nielson

**Ground Surface Elevation: 556,29** 

Easting: 2300726.46

		SUBSURFACE PROFILE				SAMPI	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	РІО (ррт)	Remarks
		Topsoil Grassy topsoil	-1		4000/		0.0	
2-		Sandy Clayey Silt Sandy Clayey SiLT, moderate plasticity, moderately sorted, moist, firm, 10YR 3/3 Dark Brown	-2		100%	Moist	0.0	
3-		Sandy Silt Sandy SILT with some clay, low plasticity, loose, moderate to well sorted, damp, 10YR 4/2 Dark Grayish Brown			100%	Damp	0.0	
4-		Sandy Silt Sandy SILT, low plasticity, well sorted, firm, dry, 10YR 4/3 Brown	-4		4000/	D	0.0	
6-		Clavey Silt	-6		100%	Dry	0.0	
7-		Clayey Silt Clayey SILT, moderate plasticity, stiff, dry, well sorted, 10YR 6/3 Pale Brown			100%	Dry	0.0	
8-		Same as above Increasing sand from 9'-10'	-8					
9-					100%	Dry	00	
10-		<u>-</u>	-10					

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment: B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 10"

Total Depth Drilled: 28

Sheet: 1 of 3



Project No: AFC001-16BBC
Project: NAS Fort Worth JRB

**Client: AFCEE** 

Location: AOC-1 (Off Base)

Northing: 6965829.45

Borehole ID: WHGLTA038

Date: 5/10/00

Geologist: Brad Nielson

**Ground Surface Elevation: 556.29** 

Easting: 2300726.46

		SUBSURFACE PROFILE				SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
11-		Same as above 10YR 5/3 Brown			100%	Dry	0.0	
12-		Same as above	-12		100%	Dry	0.0	
14-	\ \ \ \	Sandy Clayey Silt Sandy Clayey SILT, moderate plasticity, firm, moderatly sorted, damp, 10YR 5/3 Brown	-14		100%	Damp	0.0	Increasing clay
16-		Sandy Clay Sandy CLAY, moderate to high plasticity, firm, moderate to well sorted, moist to wet, 10YR 4/2 Dark Grayish Brown, very sandy layer from 16'-16.5' with dark gray staining	-16		100%	Moist	413	Dark gray staining from 16'-16.5'
18-		Clayey Sand Clayey SAND, moderate plasticity, firm, wet, moderate to well sorted,	-18					
19-		10YR 4/2 Dark Grayish Brown	-20			Wet	2000+	Very strong odor

Drilled By. GPI

Drill Method: Splitspoon

Drilling Equipment: 8-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180 Hole Size: 10"

Total Depth Drilled: 28

Sheet: 2 of 3





Project No: AFC001-16BBC
Project: NAS Fort Worth JRB

Client: AFCEE

Location: AOC-1 (Off Base)

Northing: 6965829.45

Borehole ID: WHGLTA038

Date: 5/10/00

Geologist: Brad Nielson

**Ground Surface Elevation: 556.29** 

Easting: 2300726 46

							ting. 200	
		SUBSURFACE PROFILE			5	SAMP	LE	
Depth	Symbol	Description	Elevation	ASTM	Recovery	Moisture	PID (ppm)	Remarks
21-		Sandy Clay Sandy CLAY, firm, moderate to high plasticity, moderately sorted, wet, 10YR 4/2 Dark Grayish Brown			100%	Wet	2000+	
22-		Sandy Clay Sandy CLAY, firm, moderate to high plasticity, moderately sorted, wet, 10YR 4/1 Dark Gray	-22		100%	Wet	2000+	
			-24					
25-		Clayey Sand Clayey SAND, firm, moderate plasticity, moderately well sorted, saturated, 10YR 4/1 Dark Gray	-26			Satur ated	2000+	Waited 20 minutes for water to recover, no trace
26-		Same as above				Satur ated	2000+	
28-			-28					Total depth = 28'
29-					į			
30-								

Drilled By: GPI

Drill Method: Splitspoon

Drilling Equipment B-61

HydroGeoLogic, Inc. 1155 Herndon Pkwy, Suite 900 Herndon, VA 20170 (703) 478-5186 FAX (703) 471-4180

Hole Size: 10"

Total Depth Drilled: 28

Sheet: 3 of 3

# TAB

APPENDIX B

## APPENDIX B INVESTIGATION DERIVED WASTE RECORDS



#### **FAX COVER SHEET**

Date September 11, 2000	Proj	ect Number
Time 1.15 PM	Number of I	Pages. 1
TO: Ms. Karen McElroy	FROM:	Brad Nielsen
Of: Navy Environmental	Of	HydroGeoLogic, Inc.
Fax Number 817/ 782-6486		13740 Research Blvd. Unit N-5 Austin, Texas 78750
Copy to.	Fax #.	(512) 336 - 0178
SPECIAL INSTRUCTIONS	Confidential Please Reply	UrgentX For your information
	Transmission Repo	ort
into the Base sanitary sewer manhole	No 4 which occurred on Septer	gallons of monitoring well waste water mber 7, 2000 On this date, water was half hour from 1.10 p.m to 1.40 p m. to 31, 2000.
Thank you very much for your assistance from me.	nce on this project and please le	et me know if there is anything else you

IF NOT RECEIVED CORRECTLY, PLEASE CALL (512) 336-1170.



August 31, 2000

Ms. Karen McElroy Water Program Manager Navy Environmental, Building 1501 NAS Fort Worth JRB, Texas 76127 via. Facsimile

Re: Request for Discharge of Wastewater into the Base Sanitary Sewer

Dear Ms. McElroy.

HydroGeoLogic, Inc. would like to request approval for the discharge of approximately 1200 gallons of wastewater into the Base sanitary sewer system via manway #4 located at the western side of Building 1337 The wastewater was produced during ground-water sampling events at the Base while under contract by the Air Force Center for Environmental Excellence. The wastewater is currently stored in an above ground poly-tank adjacent to Building 1337.

Two grab samples (IDW071100W and IDW072100W) were collected from the above ground poly-tank and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and PCBs, total metals, and total petroleum hydrocarbons (TPH). The sample IDW072100W was collected for TPH analysis only. These samples are considered to be representative of the wastewater to be discharged. Please find the results in the attached copy of the analytical summary packages for your review.

If possible, discharge to the sanitary sewer will take place on September 6, 2000. The rate of discharge would be approximately 25 to 50 gallons per minute lasting for approximately 30 to 45 minutes. Following the event, your office will be notified of the activities indicating the date of discharge, total gallons discharged into the sanitary sewer, flow rate and total time of discharge.

Thank you very much for your assistance If you have any questions or comments, please do not hesitate to call me at 512/336-1170

Sincerely

Ì

Brad Nielsen
Project Geologist

**Enclosures** 

635 132

31 Aug 00

#### MEMO FOR RECORD

From: Karen McElroy, NAS JRB Fort Worth Water Program Manager

To: Brad Nielsen, HydroGeologic, Inc.

Subj: DISCHARGE OF SAMPLING WATER FROM GROUNDWATER MONITORING

- 1. This memo is written to reflect Mr. Nielsen's request to discharge approximately 1200 gallons of sampling water collected from quarterly groundwater sampling events on the base
- After reviewing analytical results of the above mentioned sampling events and verifying compliance with effluent limitations set forth in the Wastewater Discharge Permit, I have determined the subject water can be disposed of in the base sanitary sewer system.
- 3. This memo will serve as my authorization for Mr. Nielsen to discharge approximately 1200 gallons of sampling water into the sewer system at Manhole #4. As always, in order to complete the City's semi-annual pretreatment report due later this year, request you send me a report of the discharge event which includes exact amount discharge, discharge flowrate, date of event and time start/stop.
- 4. Please contact me at (817) 782-6477 for any questions or comments you may have. Thank you for your cooperation and assistance.

Karen McElroy

Water Programs Manager



#### **FAX COVER SHEET**

Date August 31, 2000	Project Num	ber.
Time 10 10 AM	Number of I	Pages 1
TO: Ms. Karen McElroy	FROM:	Brad Nielsen
Of: Navy Environmental	Of:	HydroGeoLogic, Inc. 13740 Research Blvd
Fax Number 817/782-6486		Unit N-5 Austin, Texas 78750
Copy to	Fax #	(512) 336 - 0178
SPECIAL INSTRUCTIONS	Confidential Please Reply	UrgentX For your information
	Transmission Repo	ort

MESSAGE: Karen, this fax is to notify you of the discharge of 1250 gallons of monitoring well waste water into the Base sanitary sewer manhole No 4 which occurred on July 11, 2000. On this date, water was discharged at a rate of 35 gallons per minute lasting for about one half hour from 9.10 a m to 9.45 a m. Approval for this discharge event was given by your office on July 5, 2000.

Thank you very much for your assistance on this project and please let me know if there is anything else you need from me.

IF NOT RECEIVED CORRECTLY, PLEASE CALL (512) 336-1170.



July 5, 2000

Ms. Karen McElroy Water Program Manager Navy Environmental, Building 1501 NAS Fort Worth JRB, Texas 76127 via. Facsimile

Re: Request for Discharge of Wastewater into the Base Sanitary Sewer

Dear Ms. McElroy:

HydroGeoLogic, Inc. would like to request approval for the discharge of approximately 1200 gallons of wastewater into the Base sanitary sewer system via. manway #4 located at the western side of Building 1337. The wastewater was produced during ground-water sampling events at the Base while under contract by the Air Force Center for Environmental Excellence. The wastewater is currently stored in an above ground poly-tank adjacent to Building 1337.

One grab sample (IDW051900W) was collected from the above ground poly-tank and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and PCBs, total metals, and total petroleum hydrocarbons (TPH). This sample is considered to be representative of the wastewater to be discharged. Please find the results in the attached copy of the analytical summary package for your review.

If possible, discharge to the sanitary sewer will take place the week of July 10, 2000. The rate of discharge would be approximately 25 to 50 gallons per minute lasting for approximately 30 to 45 minutes. Following the event, your office will be notified of the activities indicating the date of discharge, total gallons discharged into the sanitary sewer, flow rate and total time of discharge.

Thank you very much for your assistance If you have any questions or comments, please do not hesitate to call me at 512/336-1170

Sincerely,

Brad Nielsen
Project Geologist

**Enclosures** 

635 135

5 Jul 00

#### MEMO FOR RECORD

From: Karen McElroy, NAS JRB Fort Worth Water Program Manager

To: Brad Nielsen, HydroGeologic, Inc

Subj: DISCHARGE OF SAMPLING WATER FROM GROUNDWATER MONITORING

- 1. This memo is written to reflect Mr. Nielsen's request to discharge approximately 1200 gallons of sampling water collected from quarterly groundwater sampling events on the base.
- 2. After reviewing that analytical results of the above mentioned sampling events and verifying compliance with effluent limitations set forth in the Wastewater Discharge Permit, I have determined the subject water can be disposed on in the base sanitary sewer system.
- This memo will serve as my authorization for Mr Nielsen to discharge approximately 1200 gallons of sampling water into the sewer system at Manhole #4. As always, in order to complete the City's semi-annual pretreatment report due later this year, request you send me a report of the discharge event which includes exact amount discharged, discharge flowrate, date of evend and time start/stop.
- 4. Please contact me at (817) 782-6477 for any questions or comments you may have. Thank you for your cooperation and assistance

Karen McElroy

Water Program Manager

# RAB

APPENDIX C

#### APPENDIX C.1

### AOC 1 MONITORING WELL LABORATORY ANALYTICAL RESULTS

C.1 APPEN AOC 1 MON

	14	BORAT(	ORY ANAL	TICAL RESU	LTS				
(1) 10 10 10 10 10 10 10 10 10 10 10 10 10			<b>BGSMW03</b>	BGSMW03	BGSMW05	BGSMW05,	BGSMW06	BGSMW06	MW-10-62
	Reporting	製料	2000-04-13	\$2000-11-01	2000-04-12	2000-11-02	2000-04-12	2000-11-01	Z0000-04-11
Analyteric	Limit	Units	N. Tarris			N. N.		. N ::	2   2
Bromodi	0.5	:UG/L	20	; 0.5 U	0.5 U	0.5.0	0.5 U	0.0	0 :
<u> </u>	0.3	UG/L	2 U	0.3 0	0.3 ∪		0.3 U	0.3 0.3 1	0 7 6
,	0.4	. UG/L	2 U	0.4 U	040	040	0.40	0.4 U	) ) )
7	. 0.5	.UG/L	2 U .	0.5 ∪	050		0.5.0		0 %
	0.5	, NG/L	13	0.5 U	0.5 U		0.5 U	0.50	4 t
	0.5	, UG/L	<b>&amp;</b>	<b>.</b>	0.5.0	0.5 U	0.50	0.50	7 -
	0.5	, UG/L	5 N	0.5 U	0.5 U	0.5 U	0.50	0.0	. Z O Z
	0.4	UG/L	2300	2000	0.4 U	0.4 U	0.40	0.0	9
7	0.5	NG/L	77	19	0.5 U	0.5 U	0.50	0.50	084 c
	0.4	. JOO!	2 U	0.4 U	0.4 U	0.4 U	0.4 0	0.4 U	) ,
~!	0.4	UG/L	20.	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.50
	0.5	ŪG/L	2 N	0.5 ∪	0.5 U		0.5 U	0.5 U	0.7
	0.5	UG/L	2.0	0.5 U	0.5 U		0.5 U	0.5 U	,5 0
+	0.5	, UG/L	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 0	20
+	0.5	<sup>†</sup> ŪĠ/L	20	0.50	0.50	0.5 U		0.5 U	20
÷	0.5	UG/L	2 U	ີ 0.5 ປີ	0.50	0.5 U	0.5 U	0.5 U	20
-	0.5	ng/L	2 Ú	0.5 U	0.50	0.5 U	0.50	0.5 U	<del>-</del>
	2	1000	2 n		0.5 U	0.5 U	0.5 U	0.5 U	, 50
SW6260B University 3-chlorogope		ng/L		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20
- 10		1001	20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 N
-+	40		2.0	0.4.0	0.4.0	0.4 U	0.4.0	0.4 U	20
; ·	י ע	)       	)    -	0.5 U	0.50	0.5 U	0.5 U ·	0.5 U	2 0
SW8260B 1,2-Didilologuiane	0 0		2.0	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2 U
-   1	1 2 1 1	100	20	0.5 U	0.5 U	0.5 Ü	0.5 U	0.5 U	2 U
-	0 0	100	2.11	0.3 U		0.30	0.3 U	0.3 U	20
-   1	, , , ,	100	2.0	0.50	0.5 U	0.5 U	0.5 U	0.5 U	20
	; 2.0 2.0	190	2.0	0.50	0.50	0.50	0.5 U	0.5 U	2 U
	, , ,	ÚG/L		1. 0.5 U	0.50	0.5 U	0.5 U		20
SWOZOUD IIIIII 12-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	. 50	UG/L	2.0	0.5 U	0.50	_ 0.5 U	0.5 U	0.5 U	5 C
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	0.5	NG/L	2 U	0.5 U	0.50	0.5 U	0.5 U	0.5 U	5 C
	0.4	UG/L	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	. 5 O
	0.4	, UG/L	2 U	0.4 U	040	0.4 U	0.4 U	0.4 U	5 O S
4	0.5	NG/L	2 U	0.5 U	0.5 ∪	0.5 U	0.5 U	0.5 U	3.5 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5
	0.5	UG/L	220	50	0.5 U	0.5 U	0.5 U	0.6	3500 <
	0.5	UG/L	2 U .	ີ 0.5 ປີ	0.5 U	0.5 U	0.5 U	. 0.5 U	20°
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7-	0.5	UG/L	2 0	0.5 U	0.50	0.5 U	0.5 U	0.5 U	208
	0.5	UG/L	2.0	0.5 0	0.5.0	0.5 U	0.5 U	0.5 U	2 0
HydroGeoLogic, Inc.	ı <b>İ</b>		Page 1	of 6					3/21/01

HydroGeoLogic, Inc.

AOC 1 MONITORING WELL

	4	ABORAT	ORY ANAL)	TICAL RESU	LTS				
	**************************************	15.00.00	#BGSMW03	BGSMW03	BESMW05	<b>BGSMW</b> 05	BGSMW06	BGSMW06	
	Reporting		2000-04-14	2000-11-01	2000-04-12	2000,1:1-02	2000,04,12	2000-11-01	2000-04-11
	i uirie	Units	おはこと	ZZ	· Name	, N.	N	N	2
	0.5		66	45	0.5 U	0.50	0.5 U	0.5 U	220
SW8260B Isopropylbenzene (Currerie)	. כ		2.0	0.5 R	0.5 U	0.5 R	0.5 U	0.5 R	20
SW8260B Metnylene chloride	) (C)		300	310	0.50	ີ 0.5 ປີ	, 0.8	, <b>-</b>	1100
SW8Zoub Inaprinalene	0.4	100/1	180	110	0.4 Ū	0.4 U	9.0	4.0	380
SW8Zoub III-Flubylbelizetie	0.5	ÜĞ	20	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20
SW8Z0UD 1, 1, Z, Z-1 eu acilioù oculaire		NG/L	5 O	0.5 U	0.5 U	0.5 U	0.5.0	ດີ: ດີ:0	- 7 5 7
SW8200D Per acriticipation (CCL)	40		2 O.	0.4.0	. 0.4 U	0.4 Ü	0.4 U	0.4 U	50°
SW8ZOUD Digitalia	0.5	JOG/L	5 C	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2U
SW8ZOUD DIDITION IN THE WATER (MATRE)	5.0	<u> </u>	2 U	1	. 0.5 ∪	0.5 U	0.50	0.5 U	, 20
SW8260B Metry reit-buty enter (Wilbe)	, C	)     	) I C	0.50	0.5 U	_ 0.5 U <sup>−</sup>	0.5 Ū	0.5 U	5 O
- ;	) C	֓֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	, 	0.511	0.50	0.50	0.5 ∪	0.5 U	20
SW8260B 1,1,1-Trichloroethane	C C		) i	0.00	0.50	0.511	050	05U	2.0
SW8260B 1,1,2-Trichloroethane	ດ : ດີ ດີ !	) (0.5) (1.5)	) O (		1 40	1 50	0.511	050	20
SW8260B 1,2,3-Trichlorobenzene	0.5		7.0	0.00	, O , S	2000	)   	1 40	) = 
SW8260B 1.2.4-Trichlorobenzene	0.4		, 7.0	040	4. )	0:00		1 4 6	֓֞֞֝֞֜֝֞֜֝֞֜֝֞֜֝֞֝֓֓֞֝֞֝֓֓֞֝֞֝֓֡֝֞֝֝֓֡֝֝֡֝֡֝֡֝֡֝֡֝֡֝֡֝֡
	0.5	NG/L	5 N	0.5 U	0.5 U	0.50	0.5 0	0.0	) 'V
	0.3	NG/L	20	0.3 U	0.3 U	0.3 U	0.3 U	0.3 0	Z .
OWOZOU A 2 Trichloropropado	0.5	ng/L	2 0	0.5 U	0.5 U	0.5 U	0.5 U	0.50	5 O
SWOZOU I L'A'S-I I I I I I I I I I I I I I I I I I I	<u>د</u> د	/	77	12	0.5 U	0.5 U	0.7	0.8	2700
SW8260B 11,2,4-1 Infine in yluberizerie		] [] []	. 2	;   69	0.5 U	. 0.5 U	0.5 U	0.50	550
SW8260B 11,3,5-1 Imemylbenzene (intestrylene)	3	֓֞֞֝֞֝֞֝֟֝֓֞֝֟֝֓֓֟֝֟֝֝֟֝֟֝֝֟֝֝֟֝֝ ֓֓֓֞֞֞֞֓֞֓֞֞֞֞֓֓֞֞֞֞֞֞֓֓֓֞֞֓֓֓	101	, II c	,   100	20	_ 5U _	2Ú	10 0
SW8260B Vinyl acetate	7 0	֓֞֞֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֝֟֝֟֝֝֟֝֝֟֝֝֟֝ ֓֓֓֓֞֓֓֞֓֓֞֓֞֓֞֓֞֓֓֓֞֓֓֞֓֞֓֓֓֓֞֓֓֓	) = c	7.050	0.5 Ü	0.50	0.5 U	0.5 U	20
SW8260B   Vinyl chloride	. c	ָלֵי בַּי	140	5.5	1 1 1 1	9.0	6.0	0.8	7800
SW8250B (m.p-Aylene (sum of isomers)	5.0	, UG/L	ω	8	0.5 U	0.5 U	0.5 U	0.5 U	1900
SW8ZOUB 10-Ayierre (1,2-Difficultylocalization)	;	 	•	Į.		1	1		





AOC 1 MONING WELL

				IABO	DRATORY A	NAI YTICAL	RESULTS			
NW-10	<b>MW-1.1公</b>	* J.W.W. 1.1	北京高京	急渡がい		- 1. The said of t	京 四 二十	10 miles	(本)	本のである。
00051(I).01	2000-04-17	2000-04-17	MW-52000	MW-512000	SAV:2:2000	SAV.2.2000	5AV-2:2000	UHGLAOC1-010 2000-12-13 N	UHGLAOC1-0201	UHGLAOC1-02011 2000-12-13:N
12 U	0.511	0.5 U	0.5 U	0.5 U	0.5 UU	12 U	12 U	0.5 U	0.5 U	0.5 U
 0.8	0.3 U	0.3 U		0.3 U	0.3 UJ	8 U	- N8	0.3 U	0.3 U	0.3 U
	4	0.4 U	ĺ	0.4 U	0.4 UJ	, 10 U	10 U	0.4 U	0.4.0	
120			i D	0.5 U	0.5 UJ	12 U	12 U		0.5 U	0.5 U
12 U	ုံဟု	0.5 U	0.5.0		. 06	12 U	12 U		0.5 U	0.5 U
. 20	0.5 U	0.5 U	0.5 U	0.5 U	47	12 U	12 U		0.5 U	0.5 U
12 Ū	lr.	0.5 U	0.5 U	'n	0.5 UJ	120	12 U	0.5 U	0.5 U	0.5 U
870	4	0.40	10	0.4 U	330	720	650		0.4	0.4 F
410	0.50	0.5 U	0.5 ∪	0.5 U	12 J	22	19	0.5 U	0.5 U	0.5 U
10 U	0.4 U	4	0.4.0	040	0.4 UJ	10 U	10 U	0.4 U	0.4 U	0.4 U
10 U	0.4 U	4	0.4 U	040	0.4 UU	10 U	10 U	0.4 U	0.4 U	0.4 U
12 U	0.5 U		0.5 U		0.5 UJ	12 U	12 U		0.5 U	
12 Ü	0.5 U	0.50	0.5 U	0.5 U	0.5 UU	12 U	12 U		0.5 U	0.5 U
12 U	S	0.5 U	0.5 U		0.5 W	12 U	12 U		0.5 U	
12 Ü	0.5 U	0.5 U	0.5.0	0.5 U	0.5 UJ	12 U	12 U	0.5 U		0.5 U
	0.5 U	0.5 U	0.5 U		0.5 UJ	12 U	12 U	0.5 U		0.5 U
9		- 0.5 U	0.5.0	0.5 U	2 J	9	12.0	0.5 U	0.5 U	
12 U	S	0.5 U	0.5 U		0.5 UJ	12 U	12 U	0.5 U	0.5 U	0.5 U
12.0	0.5 U	0.50	0.5 U		0.5 UJ	12 U	12 U	0.50	0.5 U	0.5 U
	0.50	0.5 U	0.5 U	. 0.5 U	0.5 UJ	12 U	12 N	0.5 U	0.5 U	0.5 U
	0.4 U	0.4 U	0.40	0.40	0.4 UJ	10 U	10.01	0.4 U	0.4 U	0.4 U
	0.5 Ú	0.5 U	0.5 0	0.5 U	0.5 UJ	12 U	12 U	ິດ 5'ດ	0.5 U	0.50
	0.3 U	0.3 U	0.3 ∪	0.3 ∪	0.3 UJ	0 8	08	0.3 U		0.3 U
12 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	12 U	12 U	0.5 U		0.5.U
	0.3 U	0.3 U	0.3 U		0.3 0.0	.08	8.0	0.3 U	0.3 U	0.3 U
	0.5 U	0.5 U	0.5 U	_0.5 U	0.5 UJ	12 U	12.0	0.5 U		0.5 U
12 Ū		0.5 U	0.5 U	0.5 U	0.5 UJ	12 U	12 U ,	0.5 U		0.5U
12 U		0.50	0.5 U	0.5 U	0.5 UJ	12 U	12 U	0.5 U	0.5 U	0.5 U
12 U		0.5 ∪	0.5 U		0.5 UJ	12 U	12 U	0.5 U	0.5 U	0.5 U
12 U	0.5 Ú	0.5 U	0.5 U	0.5 U	0.5 UJ	, 12 U	12.0	0.5 U		0.5 U
12 U	0.5 U	0.5 U	0.5 U	0.5 U		12 U	. 12 U	0.5 U		0.5 U
10 U	0.4 U	0.4 U	0.4 U	4	0.4 UJ	10 U	10 U	0.4 U		0.4 U
10 U	0.4 0	0.4 U	0.4 U	4	0.4 UJ	10 U	10 U	0.4 U		<b>.</b>
12 U	0.5 U	0.5 U	0.5 U		0.5 UJ	12 U	12 U	050		<b>-</b> :
3300	. 0.5 U	0.5 U	0.5 U		260	800	. 098	0.5 U	0.5 U	0.50
12 U	0.5 U	0.5 U	0.5 U		0.5 UJ	12 U	12 U _	0.5 U		<b>&gt;</b>
12 R	0.5 U	0.5 U	0.5 U	'n.	0.5 R	12 R	12 R	0.50	0.5 U	0.50
12 U	0.5 U		0.5 U	0.5 U		12 U	12 U	0.5 U	0.5 U	0.5 U
12 U	0.5 U	0.5 U	0.5.0		0.5 UU	12 U	12 U	0.5 U	0.5 U	. 0.5 U
HvdroG	HydroGeoLogic, Inc.				Pa	Page 3 of 6				3/21/01
: :	<b>)</b>									

APPENDIX C.1
AOC 1 MONITORING WELL

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の情報を表現する。「「「「」」、「」、「」、「」、「」、「」、「」、「」、「」、「」、「」、「」、	UHGLAOCH DZO	2000-12-19 NE	0.5 U	0.5 R	0.5 U	0.4 U	0,5 U	0.5 U	0.4 U	0.5 U	0.5 U	0.50	; ; ; ; ; ; ; ; ;		0.0	0.5.0	0.4 U	0.50	0.3	מיני מיני	2 2 2		0.5 U	5 N	0.5 U	0.5 U	0.51	
	UHGLAÖCH-0201	2000-12-13 FD	0.5 U	0.5 R	0.5 ∪	0.4 U	, 0.5 U	0.50	0.4.0	0.50	0.5.0			0.00	0.50	0.5 U	0.4 U	0.51	)   = 0.50   - 0.50   - 0.50		ל ב מיס	O c.O	0.5 U	2.0	0.50			000
	UHGLAOCI-0101	2000-12-13 N	0.5 ∪	0.5 R	0.5 U	0,4 U		0.5 U	0.4.0	0.50			0.0	0.50	0,5 U	0.5 U	0.411	) 10	0.00	0.3 0.5 1.6	አ ር ር ር ር	0.5 U	0.5 U	20	0.511	5 4		0.00
<u>RESULTS</u>	SAV-2 2000	14.01N	320	12 U	009	910	12.Ü	12 11	101	3.5	0 7 1	r nel	120	12 U	12 U	12.0	1 1 1	2 2 7	72.0	⊃ ; ∞ ;	120	290		50 11	12	1, 20	). 	12.0
NALYTICAL	SAV-2 2000	11:01 FD	330	12 U	. 700	940	12.0	12 = 1	, , , , , , , , , , , , , , , , , , ,	2 5	120	180 7	. 15 N	12 N	120	15.0	, <del>,</del> ,	o':	12 O	0 0 1	12 N	610	110 J	FO 11		0 7 -	/80	12F
ORATORY A	00000 VAS	04-12/N	0.5 0.1	0,5 UJ	290	720	05111	0.00		204.0	0.5 UJ	0.5 0	0.5 U	0.5 UJ	0.500	0.5111	3 5	0.40	0.5 0.	3 3	0.5 UJ	150	43		,	U.5 U.5	200	
I AB	WW 52000	11-02N%	0.5 U	0.58		0.0	) i	) 	0.50	0.40	0.5 U	<b>4</b>	0.5 U	. 0.5 U	0.50	1 40	) () () ()	0.4.0	0.5 U	0.3 U	0.50	0.5 U	0.51	2 -	, , , , , ,	0.50	0.5 U	0.5 U
	COUCES //V	A OLEH TINE	0.5		120	200	0.4.0		0.50		0.5 ∪	0.5 U	0.5 U	0.5 U	0.511		0.0	0.4 U	0.5 U	0.3 U	0.50	0.50		000	2 0 2	0.5 U	0.5 U	0.50
	MMEIN			) 		0.00	0.40	0.00	0.5 U	0.4 U	0.5 ∪	0.5 R	0.5 U	0.50	130		_ 0.5 U	0.4 U	0.5 U	0.3 U	0.5 U	0.51		0.00	20	0.5 ∪	0.5 U	0.50
	**************************************	2000-04-1/	変数で大利的	0.00	) () () ()	0.0	0.40	0.50	0.5 U	0.4 U	0.50	0.5 R	0.50	0.50		0.0	0.50	0.4 U	0.3 F	0.30	0.51	) L		0.50	2 O	0.5 U	0.5 U	0.5 U
	WW.JORK	2000411-01	No. of the last of	230	12.0	820	410	12 U	12 U	10 O	12 Ū	100	12 11	5 5 5 5	2 5	120	15 U	10 0	12 U	,       8	12 1	2 5	AIN.	920	20 ∩	12.U	5300	1500

Iro: ogic, Inc.

	WHGLTA037	2000-11-02N		2, C	_2 U	40 J	2 U	2.0	3600		202	2.0		2 U	69	2 N	29 J 2 Ū	2 - Z U	ָבְ סְבָּ	2.0	2 U	20	, 0,6	2 2 2	2 O	. 5 N	5 C	0 5	) c	2 C	2 U	3900	2 U	2 U	5 O 5 O	
ELL PECIII TS	7 : ₹∵	2000-05-16 N	)     	30 04 40 U	0 0S		50 U	50 U	4300	0008	40 C	0.06		20 U			D 20 €	200	0 09 	40 U	20 U	30 U		)   	- o'⊃ 8	, 90 OS	ភ : ខ្ល	n 09 1	20 0 5	04 0 04 0 0	20.5		20 N	20 U	n 09 20 n	
APPENER C.1 MON KING W	<b>₹</b> . ₫.	2000-11-02 N	0.0	0.3.0	0.50	0.5 0	-	· ·		0.5 U	0.4 U	0.4 U	0.50	0.5 <u>U</u>	0.5,0	0.50	.: 0.5 U	) 		0.40	0.5 U	0.3 U	0.5U	0.50	0.50 0.50	0.50	0.5 U	0.5 U	0.5 U	0.4 4.0	0.4.0	0.5.0 U.S.U	0.5 U	0.5 U	0.5 U 0.5 U	!
AOC 1 MON	WHGLTA036	2000-05-16 N	0.5	0.30	1 2 2 2	0.5.0	) 	9.0	2	က	0.4 U	0.4 U	0.50	0.5 U.5 U.5 U.5	n 9.0	. 0.5 U	0.5 U	0.00	0.0	0.4 U	, 0.5U	0.3 U	0.5 U	0.30	0.50	0.5 0	ັ0.5 ປັ	0.5 U	0.5 U	4. c	) = 1: 4: 2: C	) () ()	0.5 U	0.5 U	0.5 0.5 0.5 0.5	;
•	UHGINOC1-0301)	~ 2000-12-13 NE	0.5 U	0.3 U	0.4.0	0.50	D 5.0	• '	0.40	0.5 U	0,4 U	0.4 U	0.00	0.50	0.5 0	0.5 Ú	, 0.5 U	0.00	000	0.4.0	0.5 0	0.3 U	0.5 U	0.3 0	0.5 0		. 0.5 U	0.5 U	0.5 U	0.4 0 = 1	4. r	0.50	0.5 U	0.5 U	0.5 U 0.5 U	

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APPENDIX C.1	C1 MONITORING WELL
	AOC

	ABORATORY	ANALYTICAL	RESULTS	
III WOLL AGE OF THE STATE OF TH	WHGI TA036	WHGI TA036	WHGLTA037	WHGUTA037
-	2000-05-16 N	2000:11:02!N	2000-05-16 N	2000-11-02.N
0.5 U	7	7	170	170 J
0.5 R	. 0.5 U	0.5 R	50 U	2R
0.5 Ú	0.5 F	0.5 U	1100	1100
0.4.0	6.0	4	310	270
0.5 U	0.50	0.5 U	50 U	2.0
0.5 U	0.5 U	0.5 U	50 U	20
0.4.0	0.4 U	0.4 U	40 U	2 U
0.5 U	. 0.5 U	0.5 U	20 U	20
0.50	0.5 U	, 0.5 U	20 U	20
0.50	0.50	0.5 U	20 N	20
0.5 U	0.50	0.5 Ü	50 U	20
0.5 U	0.5 U	້ 0.5 ົບ	20 U	2 ∪
0.5 U	0.50	0.5 U	20 U	
0.4 U	0.4 U	0.4 U	40 O	2 C
0.5 Ü	0.5 U	0.5 U	50 U	20
0.3 Ü	0.3 U	0.3 U	30 U	20
0.5 R	0.5 U	0.5 U	20 U	20
0.5 U	2	8.0	1900	, 2000
0.5 U	0.4 F	0.5 U	520	. 550
. 2 Ú	2.0	2.0	200 U	10 U
. 0.5 U	ຼີ 0.5 ປີ	0.5 U	_ 20 U	20
050	ω.	9.0	10000	9100
0.5 U	. 2	0.5.0	4500	4000





#### **APPENDIX C.2**

AOC 1 MONITORING WELL LABORATORY QC RESULTS

0.5 U 0.5 U 0.5 U 3/21/01

			LABO	RATORT	CRESULT	S	000100	00073001	104404
<b>≪Methôd</b>	<b>AND THE PROPERTY OF THE PARTY /b>	Units 🔄	B041200	EB041200	TB041700	EB0417001	າ ຮູບລາຍບຸດ		
SW8260B	Bromodichloromethane	NG/L		0.50	0.5 U	0.5 0.5 0.5 0.5	0.50	0.00	
SW8260B	Bromobenzene	NG/L		0.3 ∪	0.3 U	0.3 U	, 0.3 0.3	0.3 U	0.0
SW8260B	Bromochloromethane	ng/L	0.4 U	0.4 U	0.4 U	٠.	0.4 U	0.4 U	0.4 O
SW8260B	SW8260B Bromomethane	UG/L		0.5 U	0.5 U		0.5 U	0.5 U	0.5 0.5 1.00 1.00
SW8260B	n-Butylbenzene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50	0.50
	sec-Butylbenzene	UG/L	0.5 U	0.50	0.5 U	0.5 U ,	0.5 U	0.5 U	0.5 0.5 1.7.0
SW8260B	tert-Butylbenzene	UG/L	ິ 0.5 ປ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.0 0 :
SW8260B Benzene		UG/L	0.4 U	0.4 U	0.4 U		0.4 U	0.4 U	0.4 U 0.7
SW8260B Toluene	Toluene	UG/L	0.5 U	0.5 U	0.5 U	0.5 ∪	0.5 U	0.5 U	0.50
SW8260B	SW8260B   Chlorobenzene	UG/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	SW8260B 12-Chlorotoluene	, ng/r	0.4 U	0.40	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SW8260B	SW8260B 4-Chlorotoluene	UG/L	0.5 U	. 0.5 ∪	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloroethane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5.0	0.5 U
SW8260B		UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	Chloromethane	NG/L	0.5 U	0.50	0.5 U	0.5U	0.5 U	050	0.5 0
SW8260B	Carbon tetrachloride	UG/L	0.5 U		ິດ.5 U	0.5 U	0.5 0	0.5 0	
SW8260B	p-Isopropyltoluene (p-Cymene)	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.50	0.5 0.5
SW8260B	Dibromochloromethane	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1.2-Dibromo-3-chloropropane	UG/L	0.5 U		0.5 U	0.5 ∪	0.5 U	0.5 0	0.5 U
SW8260B	Dibromomethane	UG/L	0.5.0	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1 1-Dichloroethane	UG/L	0.4 U	4	0.4 U	0.4 U	0.40	0.4 U	0.4 U
SWAZEOR	1 2-Dichloroethane	UG/L	S	ີທ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	1 2-Dichlorobenzene	UG/L	0.3 U	0.3Ü	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SWRZEOR	1 3-Dichlorobenzene	UG/L	S	0.5 U	0.5 U	0.5 U	0.5 U	0.50	0.5 U
SWROEDB	1 4-Dichlorobenzene	UG/L	က	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
SWAZGOB	1 1-Dichloroethene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B		_UG/L_	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	trans-1.2-Dichloroethene	UG/L	0.5.0		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U 
SW8260B	1 1-Dichloropropene	UG/L	0.5.Ü	0.50	0.5 U	0.5∪	0.5 U	0.5.0	0.5 0
SW8260B	SW8260B cis-1.3-Dichloropropene	NG/L	0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
SW8260B	SW8260B trans-1,3-Dichloropropene	UĞ/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW8260B	SW8260B 1.2-Dichloropropane	UG/L		0.4 U	0.4 U		0.4 U	0.4 U	0.4 U
SW8260B 1	1,3-Dichloropropane	NG/L	0.4 U	0.4 U	0.4 U	0.40	0.4 U	0.40	0.40
SW8260B	SW8260B 12,2-Dichloropropane	ng/L		0.5 U	0.5 U		0.50	0.00	O .
SW8260B	Ethylbenzene	JOG/L		•	0.5 U		0.50	0.0	0 1
SW8260B	Ethylene dibromide (1,2-Dibromoethane)	UG/L			0.5 U		0.5 0.5 0.7	0.50	0.50
SW8260B	Trichlorofluoromethane	UG/L	0.5 U		0.5 U	0.5 U	0.5.0	0.5 0	0.0
SW8260B	Dichlorodifluoromethane	UG/L		0.50	0.5 U	0.5 U	0.5 U	0.50	0.50
SW8260B	SW8260B Hexachlorobutadiene	NG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50
SW8260B	SW8260B (Sopropylbenzene (Cumene)	NG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.50	0.5 U	0.5 0
SW8260B	SW8260B Methylene chloride	Jugh	0.5 U	. 21	0.5 U	15	0.50	8	0.5 U
. (17)	ימן יוֹבָּטְ וֹבְּטְּ			Page 1	of 6				
חשער	חאמוסטפטרטשיני, ייוני.			,					

0.5 U

0.5 U 0.3 U 050 0.5 U

0.3 U

0.40

0.5 U

0.5 U 0.5 U 0.4 U 0.4 U

0.5 U 0.5 U 0.5 U 0.5 U 0.5 U

0.5 U

0.5Ü

0.5 U 0.5 U 0.5 U

0.5 U

0.4 U 0.4 U

0.4 U 0.5 U

0.5 U 0.5 U 0.5 U

0.5 0.50

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EB110100 T110200

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LABORATOR AOC 1 MON

APPENDIX C.2

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	AOC

		2			. (					
	At least a new of the	LABORA	RATORY O	C RESULT	S FEDA1700	FR051600	EB051600	JTB440100	EB110100	T-1/10200
AMethod Block of Action Analyte Control of the Cont	na i i siunila ii		EBO4:12001			0.511		0.50	0.5 U	Marin Marin Marin Andrews
SW8260B Naphthalene	UG/L	0.5	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5			) 		0.411	0.411	•
CMR260B in-Propylbenzene	·UG/L	0.4 U	0.4.0	0.4 U	4. O	4. ; i	) : • (		) : -	
SWIZECOLD III CPJ COLD COLD COLD COLD COLD COLD COLD COLD	:UG/L	0.5 U	0.50	0.5 U	050	0.5 U	0.5 U	0.50	0.0	
SW8Z6UB 1,1,2,2-1ettachiological	701	1150	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50	0.5 U	) <b>.</b>
SW8260B   Letrachioroemene (PCE)	- - - - - - - - - - - - - - - - - - -		0411	0.40	0.40	0.4 U	0.4 U	0.40	0.4 U	,
:SW8260B Styrene	֓֞֝֟֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֓֓֓֓֓֡֓֡	ביים ביים ביים	0.50	0.50	0.5 U	0.5 Ū	0.5U	0.50	0.5 U	
SW8260B (Bromotorm		בי קילים פילים	0.50	0.50	0.5 U	0.50	0.5 U	0.50	0.5 U	41 1
SW8260B Methyl tert-butyl etner (M I b.c.)		2 2	0.50	0.5.0	0.5 U	0.5 U	0.5 U	0.50	0.5 U	
SW8260B 1,1,1,2-Tetrachloroethane	֓֞֞֜֜֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	)   	5.0	0.50	0.50	0.50	0.5 U	0.5 U	0.50	
SW8260B 1111-Trichloroethane	֓֞֞֜֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			)   1900   1900	0.50	0.50	0.5 U	0.50	0.5 U	· -
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SW8260B Trichloroethene (TCE)	NG/L	0,50	0.0	0,00			0.4	030	0.3 U	!
SW8260B Chloroform	NG/L	0.30	ان ان ان ان	ر د د د			0.511	0.50	0.5 U	
SW8260B 1,2,3-Trichloropropane	NG/L	0.50	0.0 0.1	0.0	0.00	2 2	25.0	0.50	0.5 Ü	1 1
SW8260B 1,2,4-Trimethylbenzene	ng/r	0.50	0.0	0.00		180	0.50	0.50	0.5 U	1
SW8260B 1,3,5-Trimethylbenzene (Mesitylene)	NG/L	0.5 U	0.50	0.0	0.00	5.5	200	20	2.0	
SW8260B Vinyl acetate		20	20.	0 7	0.7	07	0.2	0.51	0.5 Ü	-
SW8260B Vinyl chloride	NG/L	0.5 ∪	0.5 U	0.00	0.00		50,0	,   200   0.50	0.50	
SW8260B   m.p-Xylene (sum of isomers)	UG/L	0.5 U	0.5 U	0.50	O .		200		0.511	1
SW8260B lo-Xviene (1.2-Dimethylbenzene)	UG/L	0.5 U	0.5 U	0.50	0.5 U	0.50	0.00	0.00		
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ŀ	·	'NG/L	UG/L	UG/L	ng/r	.UG/L	. 06/L	UG/L	. 06/L	106/L	. 06/L	UG/L	UG/L	. ng/L .	UG/L	UG/L	UG/L	ng/L	'UG/L	ng/L	'UG/L'	J/S/	NG/L	NG/L	NG/L	ng/L	, UG/L	ng/L	- Ng/L	. UG/L	: NG/L	UG/L	OG/L	ng/L	UG/L	OG/L	NG/L	UG/L		בי ה בי	UG/L	
LABORATORY QC RESULTS	Method	SW8260B Bromodichloromethane	SW8260B Bromobenzene	SW8260B .Bromochloromethane	SW8260B Bromomethane			- "	SW8260B  Benzene	7	- <del></del> }		SW8260B 4-Chlorotoluene	SW8260B Chloroethane	SW8260B 1-Chlorohexane	SW8260B Chloromethane	SW8260B Carbon tetrachloride	SW8260B (p-Isopropyttoluene (p-Cymene)	Т -	SW8260B 1,2-Dibromo-3-chloropropane	SW8260B Dibromomethane	SW8260B 11,1-Dichloroethane	SW8260B 11,2-Dichloroethane	SW8260B 1,2-Dichlorobenzene	SW8260B 113-Dichlorobenzene	SW8260B 1,4-Dichlorobenzene	SW8260B 1.1-Dichloroethene	SW8260B cis-1,2-Dichloroethene	SW8260B   trans-1,2-Dichloroethene	SW8260B 11,1-Dichloropropene	SW8260B cis-1,3-Dichloropropene	SW8260B trans-1,3-Dichloropropene	SW8260B 1,2-Dichloropropane	SW8260B 1,3-Dichloropropane	SW8260B 2,2-Dichloropropane	SW8260B Ethylbenzene	SW8260B Ethylene dibromide (1,2-Dibromoethane)	SW8260B Trichlorofluoromethane	1		SW8260B   Isopropyiberizerie (Currene) SW8260B   Methylene chloride	1

# AOC 1 MONITORING WELL LABORATORY QC RESULTS

1	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	00000	TR121200
- Method   Control   Contr			
SW8260B Naphthalene	UG/L	0.5 U	0.5 U
SW8260B 'n-Propylbenzene	NG/L	0.4 U	0.4 ∪
SW8260B 11 12 2-Tetrachloroethane	UG/L	0.5 U	0.5 ∪
SW8260B Tetrachloroethene (PCE)	UG/L	050	0.5 U
	, UG/L	0.4 U	0.4 U
	:UG/L	0.5 ∪	0.5 U
SW8260B Methyl tert-butyl ether (MTBE)	ing/L	0.5 U	0.5 ∪
	NG/L	0.5 ∪	050
	ng/r	0.5 U	0.5 ∪
	'UG/L	0.5 U	0.5 U
. 7	NG/L	0.5 U	0.5.0
-	NG/L	0,4 U	0.4 U
-,	NG/L	0.5 ∪	0.5 U
	J/G/L	0.3 ∪	0.3 U
- <del>-</del>	, UG/L	0.5 U	0.5 ∪
	nG/L	0.5 U	0.5 ∪
	, NG/L	0.5 U	0.5 ∪
	, UG/L	2 U	2 U
	: NG/L:	0.5 U	0.5 ∪
	, 10G/L	0.50	0.5 ∪
SW8260B (o-Xylene (1,2-Dimethylbenzene)	, UG/L	050	0.5 ∪
1 1			



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## TAB

APPENDIX D

### APPENDIX D PROPOSAL FOR ADDITIONAL ACTIVITIES

#### PROPOSAL FOR ADDITIONAL AOC 1 ACTIVITIES

**LPST ID No.:** 104524

Responsible Party: Mr. Michael Dodyk, AFCEE/ERD

Facility Name: AOC 1, Former Base Gas Station and Former Base Service Station

Facility Address: NAS Fort Worth JRB, Texas 76127

Facility City: Fort Worth Facility County: Tarrant Facility ID No.: 0009696 TNRCC Region: IV Case Priority: 4.1

Proposed Activities: Quarterly Groundwater Monitoring.

#### Goal of Proposed Activity

Due to BTEX concentrations exceeding Category II target concentrations on base, and the presence of dissolved phase hydrocarbons migrating off-base into the West Fork Trinity River, the Air Force will continue quarterly monitoring during April and July 2001 from selected monitoring wells at AOC 1 (Attachment 1).

#### **Description of Activities**

Long term monitoring will continue to be conducted on a semi-annual basis on the following monitoring wells: BGSMW03, BGSMW05, BGSMW06, SAV-2, MW-6, MW-10, WHGLTA036, WHGLTA037, and WHGLTA038. These wells will be analyzed for VOCs (Method SW8260B). The sampling and monitoring of the wells will follow the procedures established in HydroGeoLogic's Basewide Quality Assurance Project Plan. Surface water sampling will occur in July 2001 to monitor the dissolved phase hydrocarbon contamination that had historically been detected seeping from the west bank.

#### Reporting Activities

The quarterly groundwater results will be presented in the AOC 1 2001 Annual Groundwater Monitoring Report at the completion of the proposed activities. This annual groundwater report will follow guidelines designated in TNRCC's guidance document, RG-43 for evaluating soil and groundwater conditions at AOC 1 based on the early exit criteria process. A revised Plan B Risk Based Site Assessment will be prepared for this site, which will include recommendations for corrective action, and results of the 2001 quarterly groundwater monitoring.

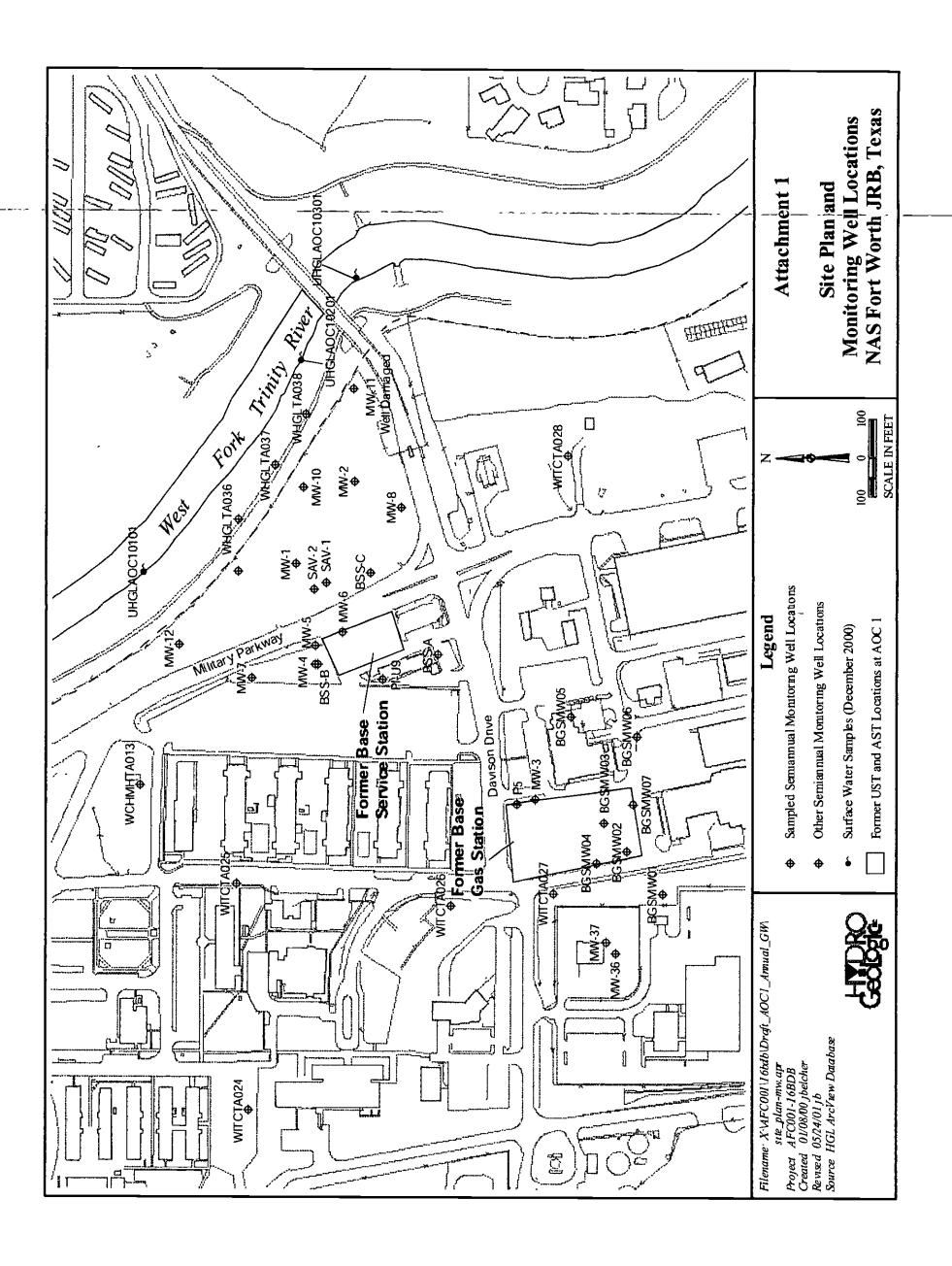
#### Waste Management

Purge water produced during well sampling will be placed into a 1,200-gallon tank. A composite sample will be collected from the wastewater and analyzed for an appropriate suite of parameters to verify compliance with the effluent limits set in the Navy's Wastewater Discharge Permit. Approval

will then be requested from the Navy Environmental office on-base for the discharge of the wastewater into the NAS Fort Worth JRB sanitary sewer system.

#### Attachments

A site map of the AOC 1 semi-annual sampling locations is presented in Attachment 1.



## TAB

APPENDIX E

### APPENDIX E SIGNED LABORATORY SUMMARY REPORT

A CONTRACT

**Severn Trent Laboratories** 

University Park, IL 60466

2417 Bond Street

Tel: (708) 534-5200 Fax. (708) 534-5211

www.stl-inc.com



May 5, 2000

Mr. Christopher Camp HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-33DBA (AND) Analytical Report & EDD Lot 9A04G823

Dear Mr. Camp:

The enclosed summary report is for the project and lot number listed above. If you have any questions, please contact me at 708-534-5200.

Sincerely,

Severn Trent Laboratories

Donna Ingersoll Project Manager

pmb

Enclosures: Summary Report & EDD

Michael J Herly

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By:

Michael J. Healy General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All 148 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety

#### **Other Laboratory Locations:**

- · Mobile, AL
- Молгое, СТ
- · Miramar, FL
- Репsасоја FL
  Taliahassee, FL
- Tampa, FL Savannah, GA
- Billerica, MA

- Westfield, MA
- · Sparks, MD
- Edison, NJ
- Whippany, NJ
- Amherst, NY
- Newburgh, NY
   Houston, TX
- Calchester, VT

#### Sales Office Locations:

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- · South Pasadena, FL
- · New Orleans, LA
- Waterford, MI
   Blairstown, NJ
- Mt Laurei, NJ
- · Morristown, NJ · Schenectady, NY
- · Cleveland, OH

Severn Trent Services Inc

#### Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A04G823

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
	001 002 003 004	W W W	80GVB138 80GVB138	04/17/00 04/17/00 04/17/00 04/17/00	04/18/00 04/18/00	N/A N/A	04/26/00 04/26/00 04/26/00 04/26/00
_AB QC:	MD1	L.I	000/0120	N/A	N/A	N/A	04/26/00
VBLKPJ VBLKPJ	MB1 MB1 BS	W	80GVB138 80GVB138	N/A N/A	N/A N/A	N/A N/A	04/26/00

Toluene trans-1.3-Dichloropropene 1.1.2-Trichloroethane 1.3-Dichloropropane Tetrachloroethene Dibromochloromethane 1.2-Dibromochloromethane 1.1.1.2-Tetrachloroethane 1.1.1.2-Tetrachloroethane 1.1.1.2-Tetrachloroethane Ethylbenzene Ethylbenzene Styrene Bromoform Isopropylbenzene 1.2.3-Trichloropropane 1.2.3-Trichloropropane 2-Chlorotoluene 2-Chlorotoluene 1.3.5-Trimethylbenzene 2-Chlorotoluene 1.2.4-Trimethylbenzene 1.2.4-Trimethylbenzene 1.2.4-Trimethylbenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.2-Dichlorobenzene	RFW#:	RFW_Batch_Number: 9A04G823 Cust ID:
00000000000000000000000000000000000000	001	Client: AFC001 MW-11WG11
	002	C001-16BBD DUP05
	003	Work TB041700
	004	Order: 60025 EB041700
	80GVB138-MB1	VBLKPJ
100 100 100 100 100 100 100 100	80GVB138-MB1	Page· 1b VBLKPJ BS
· · · · · · · · · · · · · · · · · · ·	11	

Methyl-tert-butyl ether	RFW#:	RFW Batch Number: 9A04G823 Cust IO:
0.5 U	001	23 Client AFC001-16BBD Cust ID: MW-11WG11 DUP
0.5 0	002	- 16BBD DUP05
0.5 0	003	Work TB041700
0.5 0	004	Order: 6002! EB041700
0.5 U	80GVB138-MB1 80GVB138-MB1	Work Order: 60025-001-001-0 EB041700 VBLKPJ
	80GVB138-MB1	Page: 1c VBLKPJ BS
	•	12

#### Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 – 16BBD STL# 9A04G823 VOA DATA:

- 1. All volatile sample analyses were performed within the recommended hold times.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries were within the QAPP specified QC limits in the LCS samples.
- 4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.
- 5. All volatile samples had surrogate recoveries within the QAPP specified QC limits.
- 6. The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP. In the CCV YA426 the compound Methyl-tert-butyl ether exceeded the +/-25% or 50% expected value acceptance criteria.
- 7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.

8. The water samples were analyzed without dilution using a 25 mL purge volume.

Gregory Goodwin

GC/MS Section Manager

Date

Matrix Key  W = Wastewater SE = Sediment  SE = Sediment SE = Solid SE = Solid SE = Sediment SE = Sed	FUNDUSHED BY COMPANDENCE BY COM					707 N/005	]	aboratory S Client Sample ID	S COLL		-	Dicare Hade		117 Bond Street alversity Park, IL 60466	hicago Laboratory	ommitted To Your Success	<u> </u>	きょう
Container Key  1 Plastic  1 Plastic  2 VCA Val  3 Stenie Plastic  4 Amber Glass  5 Widemouth Glass  6 Other  Preservative Key  1 HCI, Cool to 4*  2 H2SO4, Cool to 4*  3 HNO3, Cool to 4*  4 NaOH, Cool to 4*  5 NAOH/Zn Acetate, Cool to 4*  6 Cool to 4*	HINTO SERVICE HITTON TIME				•	<u>- </u>	11 + 1911 to 11.1	Sampling S	/Grab	6000	C & A Z J	Mail North 12 19 19 19 19 19 19 19 19 19 19 19 19 19	EMBH (Camp@ hg)	۱,۱	Jointa 400, Herndon, VA 2017	Herndon P	contact Chris Camp	Report To: 635 162
COMMENTS  Associated w/ TBOY1700  ASSOCIATED WF PIGNET  AND EBOY1700 WF PIGNET  AND AFC. OOI - 350BC,	RECEIVED BY COMPANY RECEIVED BY												PO# Quote	Fax	H	Address (Sume)	contact Chris Camp	2 BIII To:
Date Received 4 18 00  ect Courier. FX Hand Delivered  Bill of Lading See al Act	DATE TIME  DATE TIME							Additional Analyses / Remarks	Yes No COC not present	Labels and	PH Check ok NA Yes No (NA)	<u> </u>	<b>-7.</b> ۵	Temperature °C of Cooler	(res) No Yes (No)	<u> </u>		Shaded Areas For Internal Use Only of

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Matrix Key  ter SE = Sediment  SO = Solid  DS = Drum Solid  DL = Drum Liquid  1 = 1 earhair  1 = 5 v	MADE LOUBLE HILLSOCOLOGING NOUSHEDBY NOUSHEDBY NOUSHEDBY NOUSHEDBY NOW WAS CLASS BRELOTE		71710	WHENTA GOSWEDY	WHGCTAGOIGHU	X MHGLTA903WGOVMSD 4-17-00	X WHY TAGOSWICOHMS 4:17:00/039	08 TBOULTOO	Sample ID	tory   S   C   Client	25 Conting the Date Required 5 / Part Copy 5 / Part Copy 5 /	-RFE Londfill	cole Hade /www.	Signature	tersity Praint, in: 000000 the 708-534-5200 708-534-5211 E-Mail	Phone +		Company Address	int. COC   contact C	Report To:
Key   Preservative Key   CQ   1 HCI, Cool to 4*   2 H2SO4, Cool to 4*   3 HNO3, Cool to 4*   4 NaOH, Cool to 4*   5 NaOHZin Acetate Cool to 4*	TO DATE OF TIME STATE OF THE ST		2 V	1156		1639	7.00/039	0770 V Z	Time 41134 COV	SC S	(Grab	SC Presery 1 6 3	With the state of	Refrg #	esumpe hal-com por outle	102-411-4180 102-411-4180	$\sim$	135 Hecodon PKWY, Advess (Same	ipis Camp contact Chris C	BIII To:
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Severn Trent Laboratories

University Park, IL 60466

2417 Bond Street

Tel. (708) 534-5200 Fax (708) 534-5211

www.stl-inc.com



May 5, 2000

Mr. Christopher Camp HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-33DBA 1660 As Analytical Report & EDD Lot 9A04G760

Dear Mr. Camp:

The enclosed summary report is for the project and lot number listed above. If you have any questions, please contact me at 708-534-5200.

Sincerely,

Severn Trent Laboratories

Donna Ingersoll Project Manager

pmb

Enclosures: Summary Report & EDD

Michael & Healy

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By:

Michael J. Healy General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All 224 pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

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- Mt Laurel, NJ
- · Morristown, NJ Schenectady NY
- Cleveland OH

a part of

Severn Trent Services Inc

#### Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A04G760

CLIENT ID	SAMPLE	#	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB041200 SAV-2WG11 SAV-2WG11 BGSMW06WG11 BGSMW05WG11 EB041200	001 002 002 003 004 005	D1	W W W W W	80GVC107 80GVC109 80GVC109 80GVC109	04/12/00 04/12/00 04/12/00 04/12/00	04/13/00 04/13/00	N/A N/A N/A N/A	04/25/00 04/25/00 04/25/00 04/25/00 04/25/00 04/25/00
LAB QC:								
VBLKPL VBLKPL VBLKPH VBLKPH	MB1 MB1 BS MB1 MB1 BS		W W W	80GVC107 80GVC107 80GVC109 80GVC109	N/A N/A N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	04/24/00 04/24/00 04/25/00 04/25/00

WWW = Wastewater  SE = Sediment W = Water SO = Solid S = Sol SL = Solid SL = Solid SL = Solid DS = Drum Liquid MS = Misrcellaneous A = Air  O =  Container Key  Container Key  Preservative Key  1 HCl, Cool to 4* 2 VOA Vial 2 VOA Vial 3 Sterile Plastic 3 Sterile Plastic 4 Amber Glass 5 Widemouth Glass 6 Cool to 4* 6 Other 7 None	Į.					C P M CKal H	6 M 17CI 119M COM	CYCI IIAMANAMCDA C	DCS MINDS IN COOK IN C	7	Client Sampling Sample ID Date Time	a Indersoll Fax it is	B. Toxas Date Required S, 10,00 &	AOC 1 Investigation AFC OCI 16 BBD Preserv 1	e Williams ("Ben W W W ) # cont	Signature A	E-wall (campa)	100466 17))   Fax 1703	703-478-518	Suite 900. Herodon V	< _	October Contact	635 166 Report
COMMENTS		RECEIVED BY COMPANY COMPANY															PO# Quote	Fax	Phone	30	Address (Same)	contect (hris lamp	зиі То:
Date Received 4 13 60 Courier FEA X Hand Delivered Bill of Lading SEE - a Hackled	DATE	1-27-00									Additional Analyses / Remarks	(Yes No COC not present	e Labels an	Yes No (NA) Yes No (NA)	nH Check ok Res. Cl <sub>2</sub> Check ok	VARMIN Hold Time   Pesselv. Indicated		Temperature °C of Cooler		Sarribles	Yes No. Samples saged	Lab Lot # 4/1046 160	only '

635 167 Sample Lot#:

92146760

Severn Trent Laboratories Chicago Internal Sample Custody Transfer Record Client: 4FC001-- 16BBD

70						
Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
215	85/2/				,	
(	00-100	Still white	2011/2	43-00 1256	1256	
			0			

Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorofluoromethane I.1-Dichloroethene Methylene Chloride trans-1,2-Dichloroethene I.1-Dichloroethane Vinyl acetate cis-1,2-Dichloropropane Bromochloromethane I.1,1-Trichloroethane Carbon Tetrachloride Benzene I,2-Dichloroethane I,2-Dichloroethane I,2-Dichloroethane I,2-Dichloroethane I,2-Dichloropropane Dibromomethane Cis-1,3-Dichloromethane Dibromomethane Scis-1,3-Dichloromethane Trichloromethane Olichloromethane Carbon Tetrachloropropane Olichloropropane Olichloropropane Olichloromethane	1,2-Dichloroethane-d4 Surrogate Toluene-d8 Recovery 4-Bromofluorobenzene Dibromofluoromethane	Sample RFW#: Information Matrix: D.F.: Units:	RFW Batch Number: 9A04G760 Cust ID:
	103 % 103 % 101 %	001 WATER 1 UG/L	Client. AFC TB041200
00000000000000000000000000000000000000	73 % 77 % 71 * %	002 WATER 1 UG/L	STL Ch METHOD 8260 AFCOO1-16BBD SAV-2WG11
NNNNN SAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	110 % 1113 % 1112 %	002 DL WATER 25 UG/L	L Chicago 8260 VOLATILES Work
	97 % 103 % 101 % 97 %	003 WATER 1 UG/L	Order AFC BGSMW06WG11
0.000000000000000000000000000000000000	99 % 99 % 99 % 100 %	004 WATER 1 UG/L	Report Date: 001 16 BBD BGSMW05/G11
	93 % 100 % 99 % 98 %	005 WATER 1 UG/L	05/03/00 15·21 Page: la EB041200

Toluene 1.1,2-Trichloropropene 1.1,2-Trichloroethane 1.2-Dichloromethane 1.2-Dibromoethane 1.2-Dibromoethane 1.2-Dibromoethane 1.1,1,2-Tetrachloroethane 1.1,1,2-Tetrachloroethane 1.1,1,2-Tetrachloroethane 2-Chlorobenzene 1.1,2,2-Tetrachloroethane 1.1,2,2-Tetrachloroethane 1.2,3-Trichloropropane 1.2,3-Trichloropropane 1.2,3-Trimethylbenzene 2-Chlorotoluene 2-Chlorotoluene 1.3,5-Trimethylbenzene 1.2,4-Trimethylbenzene 1.2,4-Trimethylbenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.2-Dichlorobenzene	5 1( RFW#:	RFW Batch Number: 9A04G760
	001	Client AFCO TB041200
0 0000 0 00 00000000000000000000000000	002	001-16BBD SAV-2WG11
NA N	002 DL	SAV-2WG11
00000000000000000000000000000000000000	003	rk Order: AFC C BGSMWO6WG11
00000000000000000000000000000000000000	004	001 16 BBD BGSMW05WG11
	\ S	Page 1b EB041200

RFW_Batch_Number: 9A04G760 Cust ID: 1	Client: AFC001-1 TB041200 SAV	001-16BBD SAV-2WG11 002	SAV-2WG11 002 DL	Nork Order: AFC 001 16 BBD BGSMW06WG11 BGSMW05WG 003 00	001 16 BBD BGSMW05WG11 004	Page 1c c) EB041200 c)
RFW#:	001	002	002 DL	003	004	005
Methyl-tert-butyl ether *= Outside of EPA CLP QC limits.	0.5 U	0.5 0	NA	0.5 U	0.5 U	0.5 0 .

STL Chicago METHOD 8260 VOLATILES Report Date: 05/03/00 15:21 • Page: 2a • A

Surrogate Recovery Recovery Recovery Recovery Recovery A-Bromofluo Dibromofluo Dibromofluo Dichlorodi fluoromethane Chloromethane Chloroethane Trichlorofluoromethane I.1-Dichloroethene I.1-Dichloroethane I.1-Dichloroethane Cis-1,2-Dichloroethane Chloroform I.1-Trichloropropane Chloroform I.1-Trichloropropene Carbon Tetrachloride Benzene I.2-Dichloroethane I.2-Dichloroethane Cis-1,3-Dichloromethane Dibromomethane Cis-1,3-Dichloromethane Dibromomethane Dibromomethane Cis-1,3-Dichloromethane Dibromomethane	Sample Information	7 RFW Batch Number:
Toluene -d8 ofluorobenzene ofluoromethane hane  ene ene e e e e pene pene e pene e pene e pene e pene e pene pene	RFW#: Matrix: D.F.: Units:	er: 9A04G760 Cust ID:
101 101 101 101 101 101 101 101		Client: AFC VBLKPL
105 107 108 108 71 109 1105 90 1112 91 107 68 107 108 109 109 109 109 109 109 109 109 109 109		AFC001-16BBD OZOO
1	80GVC109-MB1 WATER 1 UG/L	VOLATILES
106 108 109 69 68 81 91 91 91 91 91 91 92 93 93	80GVC109-MB WATER 1 UG/L	Work Order: AFC VBLKPH BS
86 96 96 96 96 96 96 96 96 96 96 96 96 96		001 16 880
		Page: 2a

RFW Batch Number: 9A04G760 Cust ID.
Client:
AFC001·16BBD VBLKPL BS
VBLKPH
Work Order: AFC 001 16 BBD VBLKPH BS

RFW# 80GVC107·MB1 80GVC107·MB1 80GVC109·MB1 80GVC109·MB1

020 116			
p-Isopr 1,4-Dic n-Butyl 1,2-Dic 1,2-Dib 1,2-A-T 1,2,4-T Hexachl Naphtha 1,2,3-T	1,2,3-Ti 1,2,3-Ti n-Propy 2-Chlord 2-Chlord 1,3,5-Ti 1,3,5-Ti 1,2,4-Ti 1,2,4-Ti 1,2,4-Ti 1,2,4-Ti	1.1. hylb yren opro 1.2.	Toluene trans-1 1,1.2-T 1,3-Dic 1.3-Dic Tetrach Dibromo Dibromo 1,2-Dib 1,2-Dib
p-Isopropyltoluene 1,4-Dichlorobenzene n-Butylbenzene 1,2-Dichlorobenzene 1,2-Dibromo-3-chloropropane 1,2,4-Trichlorobenzene Hexachlorobutadiene Naphthalene Naphthalene 1,2,3-Trichlorobenzene 1,2,3-Trichlorobenzene Outside of EPA C	3-Trichloropropane opylbenzene lorotoluene 5-Trimethylbenzene lorotoluene -Butylbenzene 4-Trimethylbenzene 4-Trimethylbenzene	1,2-TetrachToroethane Thenzene Xylene Tene ene oform ropylbenzene 2,2-TetrachToroethane	73-Di 73-Di 71 chl 10 roe 10 roe 10 romoe chlor ohexa enzen
opyltoluene hlorobenzene hlorobenzene hlorobenzene richlorobenzene orobutadiene lene richlorobenzene erichlorobenzene	richloropropane lbenzene otoluene otoluene otoluene otoluene tylbenzene tylbenzene ylbenzene	Tetrachloroethane zenene	,3-Dichloropropene richloroethane hloropropane loroethene chloromethane chloromethane ohexane enzene
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CLP QC			
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116 100 114 95 92 90 100 100	96 113 111 109 109 115 111	100 101 104 101 98 85 111 92	91 88 88 100 99 106
३ ७६ ७६ ७६ ७६ ७६ ७६ <i>७</i> ६ ७६	6 96 96 96 96 96 96 96 96	96 96 96 96 96 96 96 96	96 96 96 96 96 96 96 96
000000000000000000000000000000000000000			, , , , , , , , , , , , , , , , , , , ,
108 98 106 94 95 89 90 86	9 10 10 10 10 10 9	<u>, , , , , , , , , , , , , , , , , , , </u>	100 888
			26888888888

floo	17/1/20 PXE				6:
	128 🛠 %	0.5 U	107 %	0.5 U	SMethyl-tert-butyl ether
	80GVC109-MB1	80GVC109-MB1	80GVC107-MB1	RFW#: 80GVC107-MB1 80GVC107-MB1 80GVC109-MB1 80GVC109-MB1	173
16 BBD Page: 2c	Work Order: AFC 001 16 BBD VBLKPH BS		VBLKPL BS	Cust ID: VBLKPL VBLKPL BS VBLKPH	RFW Batch Number: 9A04G7

#### Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 -- 16BBD STL# 9A04G760 VOA DATA:

- 1. All volatile sample analyses were performed within the recommended hold times.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recovery was above the QC limits for Methyl-tert-butyl ether in the LCS sample 80GVC109-MB1 BS. Since the recovery was above the QC limits and Methyl-tert-butyl ether was not detected in the associated samples, corrective action was not required. All of the other required spike recoveries were within the QAPP specified QC limits in the LCS samples.
- 4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.
- 5. The sample 9A04G760-002 had one surrogate recovery below the QC limits. The secondary dilution sample 9A04G760-002 SL had all surrogate recoveries within the QC limits and is considered the corrective action for the original sample. All other volatile samples had surrogate recoveries within the QAPP specified QC limits.
- 6. The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP.
- 7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.
- 8. The water samples were initially analyzed without dilution using a 25 mL purge volume. A secondary dilution for target compounds was performed on the sample 9A04G760-006 (1/25). The results and reporting limits were adjusted to account for the dilution performed.

Gregory L. Goodwin

GC/MS Section Manager

5/4/00

Severn Trent Laboratories

University Park, IL 60466

2417 Bond Street

Tel (708) 534-5200 Fax: (708) 534-5211

www.stl-inc.com



May 8, 2000

Mr. Christopher Camp HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-16BBD Analytical Report Lot 9A04G731

Dear Mr. Camp:

The enclosed summary report is for the project and lot number listed above. The EDD and error report will be transferred via E-mail when completed. If you have any questions, please contact me at 708-534-5200.

Sincerely,

Severn Trent Laboratories

Donna Ingersoll Project Manager

sj

**Enclosures: Summary Report** 

Michael JHoly

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By:

Michael J. Healy General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. Al1251 pages of this report are integral parts of the analytical data. Therefore, thus report should be reproduced only in its entirety.

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a part of

Severn Trent Services Inc

#### Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A04G731

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
MW-5WG11 MW-5WG11 MW-10WG11 MW-10WG11 MW-10WG11 BGSMW03WG11 BGSMW03WG11	001 001 MS 002 002 D 002 D 003 003 D	2 W W	80GVB137 80GVB136 80GVB137 80GVB137 80GVB136	04/11/00	04/12/00 04/12/00 04/12/00 04/12/00 04/12/00	N/A N/A N/A N/A N/A N/A	04/24/00 04/25/00 04/25/00 04/25/00 04/25/00 04/25/00 04/25/00
LAB QC:							
VBLKPP VBLKPP VBLKPN VBLKPN	MB1 MB1 BS MB1 MB1 BS	W W W W	80GVB136 80GVB136 80GVB137 80GVB137	N/A N/A N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	04/24/00 04/25/00 04/25/00 04/25/00

Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane I.1-Dichloroethene Methylene Chloride trans-1.2-Dichloroethene I.1-Dichloroethane Cis-1.2-Dichloroethene Cis-1.2-Dichloromethane I.1,1-Trichloroethane Chloroform I.1,1-Trichloroethane I.1,1-Dichloropropane Bromochloropropene Carbon Tetrachloride Benzene I.2-Dichloroethane I.2-Dichloroethane Cis-1.3-Dichloromethane Cis-1.3-Dichloromethane Dibromomethane Bromodichloromethane Bromodichloromethane Cis-1.3-Dichloromethane Bromodichloromethane Bromodichloromethane Bromodichloromethane Bromodichloromethane Bromodichloromethane Bromodichloromethane Bromodichloromethane	1.2-Dich Surrogate Recovery 4-Bromot	ြေ Sample Information	RFW Batch Number:
PA CLP QC	.2-Dichloroethane-d4 Toluene-d8 4-Bromofluorobenzene Dibromofluoromethane	<u></u>	<u>9A04G731</u> Cust ID:
	102 % 108 % 112 % 105 %	001 WATER 1 UG/L	Client: AFCOO
73 73 89 90 87 77 88 88 88 89 91 100 91 110 91 110 91 110 91 1113 1105 88 88 88 88 88 88 88 88 88 88 88 88 88	104 % 103 % 105 %	001 MS WATER 1 UG/L	STL Chicago METHOD 8260 VOLA AFCOO1-16BBD MW-5WG11 MW-:
222 <b>22</b>	92 % 107 % 105 % 95 %	002 WATER 5 UG/L	VOLATILES Work MW-10WG11
ANANALANANANANANANANANANANANANANANANANA	88 % 101 % 100 % 89 %	002 DL WATER 100 UG/L	Order: 60025-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	86 % 97 % 99 % 88 %	002 DL WATER 500 UG/L	Report Date: ( 001-001-0 MW-10WG11
22222 22222222222222222222222222222222	85 102 % 105 % 93 %	003 WATER 5 UG/L	05/03/00 15:15 Page: la BGSMW03WG11

Toluene trans-1,3-Dichloropropene 1.1,2-Trichloroethane 1.3-Dichloropropane Tetrachloroethene Dibromochloromethane 1.2-Dibromoethane 1.2-Dibromoethane 1.1,1,2-Tetrachloroethane 1.1,1,2-Tetrachloroethane 1.1,2,2-Tetrachloroethane Ethylbenzene Styrene Bromoform Isopropylbenzene 1.1,2,3-Trichloropropane n-Propylbenzene 2-Chlorotoluene 1.2,3-Trimethylbenzene 1.3,5-Trimethylbenzene 1.3,5-Trimethylbenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene 1.4-Dichlorobenzene 1.2-Dichlorobenzene 1.2-Dichlorobenzene 1.2-Dichlorobenzene 1.2-Dichlorobenzene 1.2-Trichlorobenzene	RFW#:	RFW Batch Number: 9A04G731 Cust ID:
	001	Client: AFCO MW-5WG11
106 112 113 113 114 115 116 116 116 117 118 119 119 119 119 1111 1111 1111	001 MS	C001-16BBD MW-5WG11
2 2222122 22 22 22 22 22 22 22 22 22 22	002	Work MW-10WG11
1100 1200 1100 1200 1100 1100	002 DL	Order: 60025 MW-10WG11
ZNZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	002 DL	-001-001-0 MW-10WG11
11 140 222232287222222222222222222222222222222	003	Page: 1b BGSMW03WG11

UST ID. MW-5WG11 MW-5WG11 MW-10WG11 MW-10WG11 MW-  RFW#- 001 001 MS 002 002 DI		NA	NA F	2 0	109 %	0 5 0	Methyl-tert-butyl ether  *= Outside of EPA CLP OC limits
UST TO MW-5WG11 MW-5WG11 MW-10WG11 MW-10WG11 B	000	002 1	10 C00	000	001 MS		17
	BGSMW03WG	1 MW-10WG11	0ائد	3	01 - 1688D		KTW balch Nullber: 9AU46/3

RFW Batch Number: 9A04G731	731	Client: AFC	STL Ch METHOD 8260 AFC001-16BBD	L Chicago 8260 VOLATILES	rk Order: 60025	Report Date: .001-001-0	05/03/00 15:15 <b>Q</b> Page: 2a
	Cust ID:	BGSMW03WG11	VBLKPP	VBLKPP BS	VBLKPN	VBLKPN BS	
Sample Information	RFW#:	003 DL WATER	80GVB136-MB1 WATER	80GVB136-MB1 WATER	80GVB137-MB1 WATER	80GVB137-MB1 WATER	-
	Units:	1/9n	ng/r	N8/L	ng/r	UG/L	
1,2-Dichloroethane-d4 Surrogate Toluene-d8 Recovery 4-Bromofluoromethane Dibromofluoromethane	bethane-d4 Toluene-d8 brobenzene bromethane	80 98 97 87 87	89 96 98 101 8	99 99 5 5 8 8 8 8 8 8	81 92 84 84 84	84 95 89 ***	======================================
Dichlorodifluoromethane Chloromethane		NN NA NA		61 61	0.55	7565 60 888:	:
Vinyl chlorideBromomethane		ΝA	0.5 U				
Chloroethane Trichlorofluoromethane		N A	0.0 0.5 5	79 76 8 % %	n ion io		
Methylene Chloride trans-1.2-Dichloroethene		NA:	00: 55:56				
ᅂ		88	•	62 * **	4.0	92 69 * %	
<u> </u>		88	0.5 U				
Bromochloromethane		S S	<u>4</u> ω.		4ω.		
1,1,1-Trichloroethane 1,1-Dichloropropene		88	0.5		ഗ ഗ		
Carbon Tetrachloride		NA			<u>د</u> ک		
1,2-Dichloroethane		NA NA	4 7		57 ±		
Trichloroethene		N N			<u>-</u> ن		
Dibromomethane		N N	40				
TOM:		N	ى بى بى	96 87	<del>ا</del> ل ا		•
*= Outside of EPA	CLP QC	NA Tımits.			U		
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RFW Batch Number: 9A04G73			e e	ا <del>ا</del> د د	3-Dichloropropane	etrach]oroethene	)ibromochloromethane	.2-Dibromoethane	-Chlorohexane	hlorobenzene	., 1, 1, 2-letrachioroethane	l/b-Xv]ene	o-Xylene	tyrene	Sromo i orim	1 2 2-Tetrachloroethane	romobenzene	2.3-Trichloropropane	1-Propy Ibenzene	.3.5-Trimethylbenzene	1-Chlorotoluene	<u> </u>	sec-Butylbenzene	1,3-Dıchlorobenzene	)-IsopropyItoluene	n-Butylbenzene	1,2-Dichlorobenzene	, 2, 4-Trichlorobenzene	Naphthalene	ממסקמסמס חיים כי כי	1,2,3-11 Cittor openzenc *= Out side of FD
	RFW#:			 												ים											ans			;	FPA CIP OC 1
Client: AF	003 DL		N N	S 3	N 3	N.	NA:	NA	NA	NA	330	NA	NA	NA	× 7	N S	NA A	· · A	NA X	NA	· NA	NA NA	NA.	. N	N	N.	N N	XX:	300	NA	Timits
AFC001-16BBD	80GVB136-MB1		0.0 7.51	٥. بر	۲ ز	•	5	0.	0.5 U	•	Э.C	0.5 U	•		о с п с	0.5	ယ်၊	> C, b		•	ი თ			, n (J	_		က်ယ	0.4 0.4		0.5 U	
Wo du lan	80GVB13		89.4 88.4	28	96	107	103	99 %		103 **		99				106	108		114	102	102 107	107	113	102	103	107	104 93	104 %	103	101	
Work Order: 6002	GD I	7	ນ ບ	ۍ ري	4	ဌာ	Ġ	'nĊ	ن. س	4 π	ט נ	ဟ	ن 🗷	ר ע	, ת	<u>က</u> (	n Ċ	<b>D</b> 0	4	יטׂי	ט ת	ຫໍ.	יט י	ת ת	ယ်	თ	بت	0.4 0.5	יטי נ	G	
60025-001-001-0 VRI KDN RS	3VB13																											100 % 97 %			
Page.																															
3		_	_																			•									

DEW Batch Number: 9A04G731	Client: AFC001-16BBD	001-16BBD	Wor	Work Order: 60025-001-001-0	5-001-001-0	Pag
Cust ID	Cust ID: BGSMW03WG11 VBLKPP	VBLKPP	VBLKPP BS	VBLKPN	VBLKPN BS	
RFW#:	: 003 DL	80GVB136-MB1 80GVB136-MB1	80GVB136-MB1	80GVB137-MB1	80GVB137-MB1 80GVB137-MB1	
Methyl-tert-butyl ether	NA	0.5 U	86 %	0.5 U	84 %	

# Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 – 16BBD STL# 9A04G731 VOA DATA:

- 1. All volatile sample analyses were performed within the recommended hold times.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. All of the required spike recoveries were within the QAPP specified QC limits in the LCS samples.
- 4. A Matrix Spike analysis was performed on the sample 9A04G731-001. Due to insufficient volume a Matrix Spike Duplicate could not be performed on the sample 9A-4G731-001. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the sample. There were not any QAPP specified QC limits for the compound Vinyl acetate. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recovery was above the QC limits for Naphthalene in the sample 9A04G731-001 MS. Since the LCS samples exhibited acceptable spike recoveries, corrective action was not required.
- 5. All volatile samples had surrogate recoveries within the QAPP specified QC limits.
- 6. The water sample was prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference acceptance criteria or 20% Drift acceptance criteria for first or higher regression curves. The compound Methyl-tert-butyl ether had a 28.2% expected value in the CCV YA425. All of the other compounds met the +/- 25% expected value acceptance criteria or +/- 50% for the exception compounds specified in the QAPP.
- 7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.
- 8. The water samples were analyzed using a 25 mL purge volume. Initial analysis dilutions were performed on the sample 9A04G731-002 (1/5) and 003 (1/5). The other sample was analyzed without dilution. Secondary dilutions for target compounds were performed on the samples 9A04G731-002 (1/100 and 1/500) and 003 (1/100). The results and reporting limits were adjusted to account for the dilutions performed.

Gregory L Goodwin

GC/MS Section Manager

5/8/00

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WW = Wastewater W = Water S = Soil SL = Sludge MS = Miscellaneous OL = Oil A = Air	RELINGUISHED BY			500	200	Piglect Location  NASEW TRB  Lab PM  Lab PM  Laboratory  ID  Piglect Location  TRB  A Trace  Lab PM  L	ADICALE HAPPIOJECT Name  ADC 1 Tou	Chicago Laboratory 2417 Bond Street University Park, IL 60466 Phone. 708-534-5200 Fax: 708-534-5211	Committed To Your Success
Matrix Key  SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leschate Wi = Wipe O =	MANNE CONTINUE			863mw03w611	MW-5WG11	Date Required Hard Copy  Triggersol  Client Sample ID	Investigation AFC-001	TATURE	
Container Key Plastic VOA VIal Sterile Plastic Amber Glass Widemouth Glass Other	raspologic H			4-11.00  351	4.11.00 1525	x / 9 / 60 x / / / / / / / / / / / / / / / / / / /	Hode: 01-1688D	703 - 4 10000	Report To:  Contact Hydroge  Company Hydroge  Address 1155 Henn  Herndon, VA
Preservative Key  HCI, Cool to 4*  H2SO4, Cool to 4*  HNO3, Cool to 4*  NeOH, Cool to 4*  NeOH, Cool to 4*  NeOH, Cool to 4*  NeOH/Zn Acetate, Cool to 4*  Cool to 4*	111/00 TIME 1700			ωG 3	8 G G	Matrix Comp/Grab VOCs (8260B)	H.Cont. 2 Valume 40 m	-5186 -4186	gen Christing alagic sunto den Pkuy suo 20170
COMMENTS: Associated with TTBOYIIOO of project No: EBOYIIOO AFC-001-33DBA	RECEIVED BY JULY JULY JOHN COMPANY COMPANY							Phone	BIII To:  Contact Chyis Camp  Company Address (SAME)
Date Received  Courier Hand Delivered  Bill of Lading—See Afficiated CH 2208 23	DATE OF TIME					Yes No COC not present  Additional Analyses / Remarks	OH Check ok Yes. Cl <sub>2</sub> Check Yes No Y	"L	Sheded Areas For Luse Only of Lab Lot # 177 15 73 75 Paging Sealed Samples Sealer Yes' No Regard On Ice Samples Intact Yes' No

Severn Trent Laboratories

University Park, IL 60466

2417 Bond Street

Tel: (708) 534-5200

Fax (708) 534-5211

www.stl-inc.com



May 31, 2000

Mr. Christopher Camp HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-16BBD Analytical Report Lot 9A05G307

Dear Mr. Camp:

The enclosed summary report is for the project and lot numbers listed above. The EDD and error report will be transferred via E-mail when completed. Analyses for Method TX1005 were completed at STL Austin. If you have any questions, please contact me at 708-534-5200.

Sincerely,

Severn Trent Laboratories

Donna Ingersoll Project Manager

sj

**Enclosures: Summary Report** 

CLP Report & Data Summary-Nancy Weaver /EDS

Approved By:

acl J. Healy General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

### Other Laboratory Locations:

- · Mobile AL
- Monroe, CT
- · Miramar Ft
- Pensacola FL
- · Tallahassee, FL
- Tampa, FL
- Savannah GA · Billerica, MA

- Westfield, MA - Sparks, MD
- Edison, NJ
- Whippany, NJ Amherst, NY
- Newburgh NY
   Houston, TX - Colchester VT

- Sales Office Locations:
- Cantonment, Ft.
- Orlando, FL
- South Pasadena, FL
- New Orleans LA · Waterford MI
- · Blairstown NJ Mt. Laurel, NJ.
- . Morristown, NJ · Schenectady, NY

Severn Trent Services Inc

a part of

# Certificate of Analysis

Quanterra Incorporated 5307 Industrial Oaks Boulevard, Suite 160 Austin, Texas 78735

512 892-6684 Direct 512 892-6652 Fax



# ANALYTICAL REPORT

PROJECT NO. AFC001-16BBD

NAS FT. WORTH JRB, 4/00 QTRLY

Lot #: I0E190249

### DONNA INGERSOLL

Severn Trent Laboratories (STL ) 2417 Bond Street University Park, IL 60466

SEVERN TRENT LABORATORIES, INC.

Sandra L. Green Project Manager

May 26, 2000

May 26, 2000

STL-Austin LOT NUMBER: **10E190249**PO/CONTRACT 9A05G307/NAS FT. WORTH

DONNA INGERSOLL
Severn Trent Laboratories (STL
2417 Bond Street
University Park, IL 60466

Dear DONNA INGERSOLL,

This report contains the analytical results for the three samples received under chain of custody by STL-Austin on May 19, 2000 These samples are associated with your NAS FT. WORTH JRB,4/00 QTRLY project.

All applicable quality control procedures met method-specified acceptance criteria.

Preliminary results were sent via facsimile on Wednesday, May 24, 2000. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at 512-244-0855.

Sincerely,

Sandra Green Project Manager

cc. Project File

# **EXECUTIVE SUMMARY - Detection Highlights**

# I0E190249

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
9A05G307-001 WHGLTA037 05/16/00 11:	00 001			
>C10 - C28	8.2	5.0	mg/L	TNRCC TNRCC 1005
C6 - C28	57	5.0	mg/L	TNRCC TNRCC 1005
C6 - C10	49 -	5.0	mg/L	TNRCC TNRCC 1005

# ANALYTICAL METHODS SUMMARY

# I0B190249

PARAMETER		ANALYTICAL METHOD
Total Pet	roleum Hydrocarbons	TNRCC TNRCC 1005
Reference	28:	
TNRCC	TEXAS NATURAL RESOURCES CONSERVATION	COMMISSION

# **SAMPLE SUMMARY**

### I0B190249

WO # SAMPLE	CLIENT SAMPLE ID	DATE	TIME
DDFR1 001 DDFR4 002 DDFR5 003	9A05G307-002 WHGLTA036	05/16/00 05/16/00 05/16/00	15:11

# NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit
- This report must not be reproduced, except in full, without the written approval of the laboratory
- Results for the following parameters are never reported on a dry weight basis color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

# STL Chicago

# Client Sample ID: 9A05G307-001 WHGLTA037

### GC Semivolatiles

Lot-Sample #...: I0E190249-001 Work Order #...: DDFR1101 Matrix.....: WATER Date Sampled...: 05/16/00 11:00 Date Received..: 05/19/00 MS Run #....: 0144142

Prep Date....: 05/23/00 Analysis Date..: 05/23/00 Prep Batch #...: 0144330 Analysis Time..: 19:40

Dilution Factor: 1

Method.....: TNRCC TNRCC 1005

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
>C10 - C28	8.2	5.0	mg/L
C6 - C28	57	5.0	mg/L
C6 - C10	49	5.0	mg/L

# STL Chicago

# Client Sample ID: 9A05G307-002 WHGLTA036

# GC Semivolatiles

Lot-Sample #...: I0E190249-002 Work Order #...: DDFR4101 Matrix.....: WATER Date Sampled...: 05/16/00 15:11 Date Received..: 05/19/00 MS Run #....: 0144142

Prep Date....: 05/23/00 Analysis Date..: 05/23/00 Prep Batch #...: 0144330 Analysis Time..: 20:11

Dilution Factor: 1

Method....: TNRCC TNRCC 1005

REPORTING

PARAMETER	RESULT	LIMIT	UNITS
>C10 - C28	ND	5.0	mg/L
C6 - C28	ND	5.0	mg/L
C6 - C10	ND	5.0	mg/L

### STL Chicago

# Client Sample ID: 9A05G307-003 KB051600A

### GC Semivolatiles

Lot-Sample #...: I0E190249-003 Work Order #...: DDFR5101 Matrix.....: WATER Date Sampled...: 05/16/00 17:00 Date Received..: 05/19/00 MS Run #....: 0144142

 Prep Date....:
 05/23/00
 Analysis Date..:
 05/23/00

 Prep Batch #...:
 0144330
 Analysis Time..:
 20:42

Dilution Factor: 1

Method..... TNRCC TNRCC 1005

		REPORTIN	r <b>G</b>
PARAMETER	RESULT	LIMIT	UNITS
>C10 - C28	ND	5.0	mg/L
C6 - C28	ND	5.0	mg/L
C6 - C10	ND	5.0	mg/L

# QC DATA ASSOCIATION SUMMARY

# IOB190249

# Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	TNRCC TNRCC 1005		0144330	0144142
002	WATER	TNRCC TNRCC 1005		0144330	0144142
003	WATER	TNRCC TNRCC 1005		0144330	0144142

### METHOD BLANK REPORT

### GC Semivolatiles

Client Lot #...: I0E190249

Work Order #...: DDKEV101

Matrix....: WATER

MB Lot-Sample #: I0E230000-330

Prep Date....: 05/23/00 Prep Batch #...: 0144330 Analysis Time..: 16:30

Analysis Date..: 05/23/00

Dilution Factor: 1

REPORTING

		KEFUKII.	NG	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
C6 - C10	ND	5.0	mg/L	TNRCC TNRCC 1005
>C10 - C28	ND	5.0	mg/L	TNRCC TNRCC 1005
C6 - C28	ND	5.0	mg/L	TNRCC TNRCC 1005
NOTER (S) •				

 $\overline{\text{NOTR}(S)}$ :

Calculations are performed before rounding to avoid round-off errors in calculated results

### LABORATORY CONTROL SAMPLE DATA REPORT

### GC Semivolatiles

Client Lot #...: IOE190249 Work Order #...: DDKEV102 Matrix...... WATER

LCS Lot-Sample#: I0E230000-330

Prep Date....: 05/23/00 Analysis Date..: 05/23/00 Prep Batch #...: 0144330 Analysis Time..: 15:26

Dilution Factor: 1

SPIKE MEASURED PERCENT

PARAMETER AMOUNT UNITS RECOVERY METHOD

C6 - C28 50.0 45.6 mg/L 91 TNRCC TNRCC 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

### GC Semivolatiles

Client Lot #...: IOE190249 Work Order #...: DDKEV102 Matrix..... WATER

LCS Lot-Sample#: I0E230000-330

Prep Date....: 05/23/00 Analysis Date..: 05/23/00 Prep Batch #...: 0144330 Analysis Time..: 15:26

Dilution Factor: 1

PERCENT RECOVERY

PARAMETER RECOVERY LIMITS METHOD

C6 - C28 91 (70 - 130) TNRCC TNRCC 1005

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

### MATRIX SPIKE SAMPLE DATA REPORT

### GC Semivolatiles

Client Lot #:	I0E190249	Work Order #	: DDA11103-MS	Matrix:	WATER
MS Lot-Sample #:	I0E170182-005		DDA11104-MSD		
Date Campled .	05/10/00 17:00	Data Bassined	· 05/17/00	MC Dawn #	0144140

Date Sampled...: 05/10/00 17:00 Date Received..: 05/17/00 MS Run #.....: 0144142

Prep Date....: 05/23/00 Analysis Date..: 05/23/00

 Prep Date....:
 05/23/00
 Analysis Date..:
 05/23/00

 Prep Batch #...:
 0144330
 Analysis Time..:
 17:33

Dilution Factor: 1

	SAMPLE	SPIKE	MEASRD		PERCENT		
PARAMETER	AMOUNT	AMT	AMOUNT	UNITS	RECOVERY	RPD	METHOD
C6 - C28	ND	56.3	42.3	mg/L	75		TNRCC TNRCC 1005
	ND	50.0	37.3	mg/L	75	0.62	TNRCC TNRCC 1005

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

### MATRIX SPIKE SAMPLE EVALUATION REPORT

### GC Semivolatiles

Client Lot #...: IOE190249 Work Order #...: DDA11103-MS Matrix..... WATER

MS Lot-Sample #: I0E170182-005 DDA11104-MSD

Date Sampled...: 05/10/00 17:00 Date Received..: 05/17/00 MS Run #.....: 0144142

Prep Date....: 05/23/00 Analysis Date..: 05/23/00 Prep Batch #...: 0144330 Analysis Time..: 17:33

Dilution Factor: 1

	PERCENT	RECOVERY		RPD	
PARAMETER	RECOVERY_	LIMITS	RPD	LIMITS	METHOD
C6 - C28	75	(70 - 130)			TNRCC TNRCC 1005
	75	(70 - 130)	0.62	(0-30)	TNRCC TNRCC 1005

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results



Lot No.: IDE 190249

# CONDITION UPON RECEIPT / VARIANCE REPORT AUSTIN LABORATORY

QUOTE			DIL" (hickad	RFA NUM	1/coc 9A05G307		
SAMP	LES	.RRIV	ED AT LAB: (Date/Time, Ininals)   SAMPLES PHECKED IN	s: {Date	Time,	(monais)	SAMPLES LOGGED IN:   LOGIN REVIEWED:
5/	19/	100		<u> 113</u>	0	٤.	# 36 G6
CONDIT	104	VARL	ANCE.	<del>,</del>			
ra .	Ne		Cunisson ( Venence (Check Une)	Yes	N#	- <u>-</u>	Cumbaun / Vanance (Check Ones
12		ı	Custody seals on coolers samples intact, explain if "No"	a		9	Proper paperwork received, explain if "No
		2	Samples received intact, if No list sample ID-tests			10	Supply (D)
<u>e</u>		3	Enough sample received for proper analysis, if No list sample		ų	10	Sample (Ds on containers match sample Ds or COO explain ?  No
			ID tests				
	3	4	Cooler temperature within 19C - 29C record imperature		_	11	Proper # of containers received, explain if No
	7	s	Acid gresersed pH < 3		Ø	\( \sigma \)	Votatile samples filled completely, if No list D and Feadspace  D - 00   min headspace 3/4   1/2    The readspace 3/4   1/2
0 0	$\frac{1}{4}$	á	Base presarved pH > 10	_			10 -003 mm Lestonce 3/4 fee 1
0 0	3	7	Residual chlorine ND	Z		13	Ail coolers on aim Trece ved vich strament. No "ist number.  # listed # received
<b>a</b> c	2	8	Samples received in proper container if No list sample ID tests			[4	Other (explain)
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ORRECT	FIVE.	ACTIO	N .				
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Chents			Informed in wr	nng on		_	3,
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Samplet REVIEV		ועד מוסי			ť	relessed	nd nonfy
Project V		ment					Date 57/9/2-2

ORIGIN 10: JOTA (708)534-1636 Bottle Prep Section SEVERN TRENT LABORATORIES 2413 BOND STREET

SHIP DATE: 18May00 ACCOUNT \*: 137134829 ACTUAL NGT: 6 LBS LBS H

UNIVERSITY PARK

IL 60466 (512)244-0855

TO: SAMPLE RECEIPT
STL AUSTIN
14046 SUMMIT DRIVE
BLDG &
AUSTIN

TX 78728

4570 7726 4177

FedEx.

REF: SULUOUT

PRIORITY OVERNIGHT

cad# 0033264 1rk#

18May00 15:59

78728 -TX-US



Shaded Areas For Internal Use Only of Lab Lot # 9 15 83 83 84 85 84 85 84 85 84 85 84 85 84 85 84 85 85 85 85 85 85 85 85 85 85 85 85 85	Within Hold Time Present, Indicater C Yes No N/ 2 No COC not present	4.6 - 5/19/06	CARUR- EX	S 19/02 TIME 35%  S 19/04 S 34  C With Pail Ex 8 144 2173 454  Courter: FM-X Hand Delivered  Bill of Leding: Set 1400 Mg	THE Chicano Chain of Chichol. Cliff 35 78 788
Contact Chris Camp Company Address (Same) Phone Fax Ones				RECEIVED WWW. COMPANY RECEIVED WWW. STORING ON VOUS ARE INCLIDING WITH VOCS EQUIPMENTS ON VOUS ARE INCLIDING WITH VOCS EQUIPMENTS ON VOUS ARE INCLIDED ON PROPERTY.	
ydrastologic, Inc. 55 Herodon Pkwy, 100, Herodon, VA20170 3-478-5186 2-471-4180	Matrix Prefig # South Solume Comp/Grab 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	1160 W G 3 3 2 2 0800 W G 2 2 3 2 3 2 3 2 3 3 3 3 3 3 3 3 3 3 3	1700 W G 3 /2	ATE	None   / None
Affle Contact	Signature.  Signature.  Apply Aff (1) Alf al.  Aff (1)	11-9 -	E 505 16 00 A 5-16-00	Sediment 1 Plass Solid Orum Solid 3 Sterl Court Liquid 4 Amb Leachaite 6 Other Wipe 6 Other Court Solid 5 Wide	
Committed To Your Success Committed To Your Success 2417 Bond Street University Park, IL 60466 Phone 708-534-5200 Fax 708-534-5211	Sampler Name:  Jennier Wallace Project Name.  ACL Groundwater Project Location NAS Fort Worth Till Lab PM Down Inger 150 Laboratory Salas	- 76 1	6000 6000	Metringuished By  Metringuished By  WWY = Wastewater  W = Watewater  S = Soil  S = Soil  MS = Miscellaneous  L =  MIS = Miscellaneous  L =  MIS = Miscellaneous  MIS = MISCELlane	- 1

							635	2 (	3		
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 <u> </u>	_			5/6-00	Date of Collection	ected	nager:	AFC001- 16 BBD		Laboratorie	
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				-	Due Date			,	D/SU	11	
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Internal Chain	Edd. ERPIMSH			Refer to	Deliverables	W.O. #	Total No. of Samples in Shipment:	Today's Date:_	RM (Side 1 of 2)	7	
cha.n	MSH			QAPP	Reporting Limits		າກples ເກ Sh	5			
					Analyte List		pment:	5-18-00			
			`		Hold Time/ Sample/Ext		W	O			
		-	coolxi		Method Ref.				0	001	8

22-11-014/B-1/9

Other special requirements/certifications: \( \frac{\chi\_0}{200} \) | Courts to \( \frac{\chi\_0}{200} \) | \( \frac{\chi\_0}{200} \) | Hazard/Safety: \( \frac{\chi\_0}{200} \) | Ves / No / Unknown = Radiation | High Hazard | Hig

High PCBs/Dioxins

Laboratory Sign-Off:

Date:

(Please circle and indicate)

Shipped VIA:

(EDEX / UPS / EMERY / Other:

# Severn Trent Laboratories Chicago

	OFF-LOAD / SUBCONTRACT FORM (Side 2 of 2)	Ĺ
Reason for Subcontracting: At	Reason for Subcontracting: Analysis not performed at STL Chicago	1
Subcontract Laboratory: STL Laboratory Address	STL Austin 14046 Summit Drive Swite III Austin Tx 78728	
Phone Number 1-5	-512-244-0855	
Quote.  LL #.  Client Approval. Yes / No (circle one)  Date of Approval	de one)	
Checklist for Subcontracted Sam	Checklist for Subcontracted Samples (to be completed at the time of shipment)	
Required Sent  Kes (es/No Chain  Yes / No Yes / No Cover  Yes Yes / No Return  Yes / No Yes / No Off-Lo	Chain-of-Custody (attached copy to this checklist as record of applicable samples) Cover Letter Return Receipt Post Card Off-Load / Subcontract Form (side 1 only)	
Yes / No	Request for Lab to Perform Quality Control Samples  Blind Quality Control Samples: ParametersSupplied by	1
Yes / No Yes / No	Digestion Records: Prep Batch No	
Yes / No	Other Information that is pertinent to the analysis and to the generation of a final report.  Weights, Volumes,% Solids,Concentration Factors,	
Comments		, }
		1

CHI 22 11 014/B-1/9

Shipment Packed By / Date

Reviewed By / Date:

00019

**Severn Trent Laboratories** 

2417 Bond Street University Park, IL 60466

Tei: (708) 534-5200

Fax (708) 534-5211

www.stl-inc.com



June 21, 2000

Mr. Christopher Camp HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-16BBD Analytical Report Lot 9A05G305

Dear Mr. Camp:

The enclosed summary report is for the project and lot number listed above. The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations. The EDD and error report will be transferred via E-mail when completed. If you have any questions, please contact me at 708-534-5200.



Severn Trent Laboratories

Donna Ingersoll Project Manager

sį

Enclosures: Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

Ulman

Approved By:

General Manager

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Other Laboratory Locations:

- Mobile AL
- · Anaheim CA
- Aurora, CO
- Monroe, CT
- Miramar FL Pensacola, Fl
- Tallahassee FL • Tampa FL

- Westfield, MA
- Sparks MD
- Edison, NJ
- Whippany NJ
- Amherst, NY Newburgh NY
- Austin TX . Corpus Christi TX

Sales Office Locations:

- Cantonment FL
- Orlando, FL
  South Pasadena, FL
- · New Orleans, LA
- · Waterford, MI - Holly Springs, NC
- Blairstown NJ - Morristown NJ

a part of

Several Lott Services like

# Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A05G305

CLIENT ID	SAMPLE #		MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
WHGLTA037 WHGLTA037 WHGLTA036 TB051600A EB051600A	001 001 002 003 004	D1	W W W	80GVB165 80GVB165 80GVB164	05/16/00 05/16/00 05/16/00 05/16/00 05/16/00	05/17/00 05/17/00 05/17/00	N/A N/A	05/26/00 05/26/00 05/26/00 05/26/00 05/26/00
LAB QC.								
VBLKRB VBLKRB VBLKHK VBLKHK	MB1 BS MB1 BS MB1 BS		W W W	80GVB165 80GVB165 80GVB164 80GVB164	N/A N/A N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	05/26/00 05/26/00 05/25/00 05/25/00

Matrix Key  WW = Wastewater  W = Water  W = Water  S = Solid  S = Solid  S = Sudge  MS = Miscellaneous  A  Matrix Key  SE = Sediment  SO = Solid  DL = Drum Liquid  L = Leachate  OL = Ol  O =	RELINQUISHED BY COM		004 E8051600A	002 NHGLTA 030	DO WHGLTA037	The Linguistic TRB	Jennifer Wallage Project Name.  ACL Groundwater  Samplings	## \$1000000 AFC 1. 80466 F. 1. 5220 F. 1. 5220 F. 1. 5220 F. 1. 52211
Container Key Pres  1 Pastic 2 VOA Viai 2 VOA Viai 3 Sterile Plastic 4 Amber Glass 5 Widemouth Glass 6 Other 7 None	Any 41/5 Dicours of 100 Contesting		A 5-16-00 1700 W C	6-16-00 1511	7 5-16-00 1160 W	Matrix	Signature.    It   Delta Compared Number   H Cont.	contect Chris Camp company Hydrolaed Address 1155 Herr Suite 900 Herr Xmore 703-471- Fex 703-471-
ervative Key to 4* to 10 4* do to 4* Acetate, Cool to 4*	TIME (8/0) RECEIVED BY		4	, N W	3) VOK SWY TY TY 7) P	mp/Grab -5 8260 B H 1005 4Hs \$310	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Contact () Pkwy, Address VA2070 Phone Pax Po#
Sociated with vocs Shart E3051600 AFC OOL 26666 AFC OOL 29 BBBA	Walnut COMPANY				Aq	Yes	PH Che	Same Chan Lab  (Same)  Receive  Yes  Timp
Are in cooler with Fact EXT 8144 2173  I with voc3  EBOX 1600  Courier Fact—X Hand Deliver  1 2666  Date Received  Courier Fact—X Hand Deliver  1 2666  Bill of Lading See Collection  STLT  STL	S-PATE CO-TIME				Additional Analyses / Remai	S No COC not prese	PH Check ok Res Che Che Yes No NA Yes No	→ <del></del>

635 20	08									<del>_</del>			<del></del>			_					•	
RELINCUISHED BY  WWW = Wastewater  W = Waster  S = Studge  SL = Studge  MS = Miscellaneous  OL = Oil  A = Air	RELINOUSSHED BY		(X)	1000	200						Laboratory ID MS-MSD	Lab PM	Project Location	Project Name	K.Dur	퐒	Phone: 708-534-5200 Fax 708-534-5211	2417 Bond Street University Park, IL 60466	Chicago Laboratory	Committed To Your Success		
Matrix Key SE = Sedimen SO = Solid DS = Drum Lig L = Leachate WI = Wipe O =	CDMPANY			WHELTAU	W#GLTA036WG-		TRIP BLANK-OSHU. A	740	WHGLTA OF	WHOLTA OZ	Client Sample ID		~ Teo	25,25,35	}			4	natory TH+CI	Success CLP-Like	There	>
	CDMPANY			A 03766-11	36 WG -01	, , ,	~K-OShu	24:2	26.01	8-03 5/14		Fex	Date Required Hard Copy	AFC 001-	TO A TO T	Signature	E-Mail _	·	Phone	he Address		Contact
lainer K	DATE S///			Je	1511			gri	143	14/00 905	Sampling Date Time		6,13,00	10000	<b>以</b>			70,/971	ا بع	o Hennels		Cheir C
Preservative Key 1 HCl Cool to 4* 2 H2SO4, Cool to 4* 3 HNO3, Cool to 4* 4 NeOH, Cool to 4* 5 NaOHZn Acetate, Cool to 4* 6 Cool to 4* 7 None	TIME 725			٤	٣		ر <b>ود</b>	4	26	一つマ	Com	atrix p/G	rab	Proserv Proserv	<del></del>	Refrg #		-4/8.	-	Vu Co	20 6009.5	
\\-					-			7	7		Circle Centl TPH 1311			7-6			Por	Fex	Phone	7 Y Z	Company	Contact
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AFLON-2666	COMPANY			+								<del>- ,</del>					-   -   -  -					
<u>a</u> 0 5	2										Addition	N	Kes No	Yes No	pH Check ok	Yes No	Mold Male	Temperature	(Yes) No	Repetyed on Ice	Yes Notice	Lab Lot #
Date Received 5 7 Courier Red + Hand Delivered Courier Red + Hand Delivered Bill of Lading SEE at \$\frac{1}{27.09.23}	12 M										Additional Analyses / Remarks		res No COC not pres	NA Yes	<del></del>	$\overline{}$	Ր	) ο 1 ο	<u>ا</u> '	4	Yes Yes	<b>)</b> }
17, C affact	TIME										Remarks		COC not present	s No (T	N	8 No 7	Present indicati	Cooler	700	Samples Intact	No	23

209

Severn Trent Laboratories Chicag Internal Sample Custody Transfer Record

5

Sample Lot# 9#058 305

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																	1,4	100	2 110	Sample No.
																(HAH)		8260	Columbia	Analysis
																) H. M.		Anenio Look	Reinquisned by:	Daliment
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																05/24/00	2/15/00	5000	Date	
				-						•						1010	1045	1335	Time	
																			Comments	

# Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 – 16BBD STL# 9A05G305 VOA DATA:

- 1. All volatile sample analyses were performed within the recommended hold times.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the L'CS (Laboratory Control Sample) samples. There was not QAPP specified QC limits for vinyl acetate s. At the clients request, the compound was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recovery was above the QC limits for Bromomethane in the LCS sample GVB164-MB1 BS. The spike recovery was above the QC limits for Bromomethane and Bromoform in the LCS sample GVB165-MB1 BS. The compound Bromomethane and Bromoform were not detected in the associated sample. Further corrective action was not performed. All of the other required spike recoveries were within the QAPP specified QC limits in the LCS sample.
- 4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.
- 5. All volatile samples had surrogate recoveries within the QAPP specified QC limits.
- 6. The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The samples were quantitated using the initial calibration. In the continuing calibrations, all CCC compounds met the 20% Difference/Drift acceptance criteria. All of the compounds met the +/- 25% or +/- 50% expected value acceptance criteria specified in the QAPP.
- 7. All internal standard areas and retention times were within acceptance limits as compared to the corresponding continuing calibration standard.
- 8. The water samples were analyzed without dilutions using a 25-mL purge volume.

Matthew A. Kobus

GC/MS Volatiles

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421/6=

# 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WHGLTA037

ab Name: STS CHICAGO

Contract:

Case No.:

SAS No.: SDG No.: U05305

Matrix. (soil/water) WATER

Lab Sample ID: 9A05G305-001

Sample wt/vol:

Lab Code:

25.00 (g/mL) ML

Lab File ID: IQM07

Level: (low/med)

LOW

Date Received: 05/17/00

% Moisture: not dec

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor. 100.0

CONCENTRATION UNITS:

CAS NO. (ug/L or ug/Kg) ug/L COMPOUND Q

	(43, 2 0,	<b>.</b>	~
75-71-8	Dichlorodifluoromethane	50	 U
1 74-87-3C	Chloromethane	<del></del>   50	υl
75-01-4V	/invl chloride	<del></del>   50	υl
74-83-9E	Promomethane	50	U
75-00-3	Chloroethane	<u> </u>	ŪΪ
75-69-4	richlorofluoromethane	<del></del>   50	ŭΙ
75-35-41	,1-Dichloroethene	50	υl
75-09-2N	Methylene chloride	50	Ü
1634-04-4N	Methyl-tert-Butyl Ether	50 l	U
156-60-5t	rans-1.2-Dichloroethene	50 l	U
75-34-3	L.1-Dichloroethane	40	U
108-05-4\	/invl Acetate	200	U
156-59-2	cis-1,2-Dichloroethene	50	U
594-20-72	2.2-Dichloropropane	<del></del>   50	U
74-97-5[	Bromochloromethane	<del></del>   40	U
67-66-3(	Chloroform	30	U
71-55-6	l,1,1-Trichloroethane	50	U
563-58-6	l.1-Dichloropropene	50	U U
56-23-5	Carbon tetrachloride	50	U
71-43-2	Benzene	4100	E
107-06-2	1,2-DichToroethane	50	U
79-01-6	Trichloroethene	50	U
78-87-5	1.2-Dichloropropane	<del></del>	U U
74-95-3	Dibromomethane	<u> </u>	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene_	50	U
108-88-3	Toluene	7600	E
10061-02-6	trans-1,3-Dichloropropend	e \ 50	U
79-00-5	1.1.2-Trichloroethane	50	
142-28-9	1.3-Dichloropropane	( 40	
127-18-4	Tetrachloroethene	<u> </u>	
124-48-1	Dibromochloromethane	<u> </u>	
106-93-4	1,2-Dibromoethane	50	
544-10-5	1-Chlorohexane	<u> </u>	U
l			.\ <u></u>

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WHGLTA037

Lab Name: STS CHICAGO

Contract.

Lab Code.

Case No.:

SAS No.:

SDG No., U05305

Matrix (soil/water) WATER

Lab Sample ID: 9A05G305-001

Sample wt/vol:

25.00 (g/mL) ML

COMPOUND

lab File ID: IOM07

Level: (low/med) LOW

Date Received: 05/17/00

CAS NO

% Moisture: not dec.

Date Analyzed 05/26/00

Column. (pack/cap) CAP

Dilution Factor: 100.0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Q

108-90-7------Chlorobenzene 40 630-20-6----1,1,1,2-TetrachToroethane 50 U 100-41-4-----Ethylbenzene Ε 4800 136777-612----p.m-Xylene E 9000 95-47-6-----o-Xy1ene \_\_\_\_ 4200 100-42-5----Styrene 40 U 75-25-2-----Bromoform 50 U 98-82-8-----Isopropylbenzene\_ 170 79-34-5-----1,1,2,2-Tetrachloroethane U 50 108-86-1-----Bromobenzene 30 U 96-18-4-----1.2,3-Trichloropropane\_\_ 50 U 103-65-1----n-Propylbenzene 310 95-49-8-----2-Chlorotoluene IJ 40 108-67-8-----1.3,5-Trimethylbenzene\_\_ 520 106-43-4-----4-Chlorotoluene 50 U 98-06-6----tert-Butylbenzene 50 95-63-6----1.2.4-Trimethylbenzene 1900 135-98-8-----sec-Butylbenzene IJ 50 541-73-1-----1.3-Dichlorobenzene 50 U 99-87-6----p-Isopropyltoluene 50 U 106-46-7-----1.4-Dichlorobenzene 30 U 104-51-8----n-Butylbenzene U 50 95-50-1-----1.2-Dichlorobenzene 30 U 96-12-8-----1,2-Dibromo-3-Chloropropane 120-82-1-----1,2,4-Trichlorobenzene 50 U 40 U 87-68-3-----Hexachlorobutadiene U 50 91-20-3-----Naphthalene 1100 87-61-6-----1.2.3-TrichTorobenzene Ū 50

# 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: STS CHICAGO

Case No.:

Contract. SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-001

Sample wt/vol: 25.00 (g/mL) ML

Lab Code:

Lab File ID: IQM07

Level. (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 05/26/00

GC Column · CAP

ID: 0.53 (mm)

Dilution Factor: 100.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found, 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q ====
1 2 3 4 5 6 7	UNKNOWN CYCLOALKANE SUBST. BENZENE SUBST. BENZENE SUBST. BENZENE SUBST BENZENE	13.37 26.18 26.84 28.23 28.70	300 2200 650 570 1000	J J
8 9 0 1. 2. 3. 4				
16 17 18. 19.				
21 22. 23 24. 25.				
26. 27 28 29.		_		

# 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WHGLTA037DL

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-001

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: IQM05

Level: (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1100 0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

	·		
75-71-8	Dichlorodifluoromethane	500	U
	Chloromethane	500	ŭl
	Vinyl chloride	500	ŭl
74-83-9	Bromomethane	500	ŭl
75-00-3	Chloroethane	500	ŭl
75-60-4	Trichlorofluoromethane	500	ŭl
	1,1-Dichloroethene	500	ŭl
	Methylene chloride	500	ŭl
	Methylene chroride Methyl-tert-Butyl Ether	500	ŭ
		500	ŭ
	trans-1.2-Dichloroethene	400	ŭ
	1.1-Dichloroethane	2000	ŭ
	Vinyl Acetate	500	Ŭ
100-09-2	cis-1,2-Dichloroethene	500	ŭl
594-ZU-/	2,2-Dichloropropane	400	ŭ
	Bromochloromethane		
	Chloroform	300	U)
	1,1,1-Trichloroethane	500	U
	1,1-Dichloropropene	500	Ų
	Carbon tetrachloride	500	Ñ
71-43-2		4300	D,
107-06 <b>-</b> 2	1,2-Dichloroethane	500	U
79-01-6	Trichloroethene	500	U
78-87-5	1,2-Dichloropropane	400	U
74-95-3	Dıbromomethane _	500	U
75-27-4	Bromodichloromethane	500	U
10061-01-5	cis-1,3-Dichloropropene	[ 500	U
108-88-3	Toluene	<sup>-</sup>   8000	D
10061-02-6	trans-1,3-Dichloropropene	<sup>-</sup>   500	U
79-00-5	1,1,2-Trichloroethane	<sup>-</sup>   500	U
142-28-9	1,3-Dichloropropane	<sup>-</sup>   400\	U
127-18-4	Tetrachloroethene	<sup>-</sup>   500	U
124-48-1	Dibromochloromethane	<sup>-</sup>   500	U
106-93-4	1,2-Dibromoethane	<sup>-</sup>   500	U
544-10-5	1-Chlorohexane	_  500	Ū

EPA SAMPLE NO.

WHGLTA037DL

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.; SAS No.;

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-001

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: IQM05

Level: (low/med)

LOW

Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1000.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7Chlorobenzene	400	U
620 20 6 1 1 1 2 To+nochlangethang	500	ŭl
630-20-61,1,1,2-TetrachToroethane		Ϋ́
100-41-4Ethylbenzene	5000	וא
136777-612p,m-Xylene	10000	וא
95-47-60-Xylene	4500	D
100-42-5Styrene	400	U
75-25-2Bromoform	500	U
98-82-8Isopropylbenzene	500	U
79-34-51,1,2,2-Tetrachloroethane	500	U
108-86-1Bromobenzene	300	U¦
96-18-41,2,3-Trichloropropane	500	U
103-65-1n-Propylbenzene	400	U
95-49-8	400	U
108-67-81,3,5-Trimethylbenzene	500	U
106-43-44-Chlorotoluene	500	U
98-06-6tert-Butylbenzene	500	U
95-63-61,2,4-Trimethylbenzene	500	ŭΙ
135-98-8sec-Butylbenzene	500	ŭl
541-73-11,3-Dichlorobenzene	500	ŭl
99-87-6p-Isopropyltoluene	500	ŭ
106-46-71.4-Dichlorobenzene	300	ŭl
104-51-8n-Buty1benzene	500	ŭ
95-50-11,2-Dichlorobenzene	300	1
06 12 9 1 2 Dibama 2 Chlaranaana		U   U
96-12-81,2-Dibromo-3-Chloropropane_	500	
120-82-11,2,4-Trichlorobenzene	400	U
87-68-3Hexachlorobutadiene	500	i U
91-20-3Naphthalene	500	U'
87-61-61.2.3-TrichTorobenzene	500	U
l	!	ا

EPA SAMPLE NO.

WHGLTA036

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-002

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: IQM06

Level: (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L \_

0,10,10,	(43, 2 0, 43,	· · · · · · · · · · · · · · · · · · ·	~
75-71-8 <b>-</b>	Dichlorodifluoromethane	0.5	U
74-87-3	Chloromethane	0 5	U
75 <b>-</b> 01-4 <b>-</b>	Vinyl chloride	0.5	U
74-83-9	Bromomethane	'0 5	U
75-00-3	Chloroethane	0.5	U
75-69-4	Trichlorofluoromethane	0.5	U
75-35-4 <b>-</b>	1.1-Dichloroethene	0.5	U
75-09-2	Methylene chloride	0.5	U
1634-04-4	Methyl-tert-Butyl Ether	0 5	U
156-60-5	trans-1.2-Dichloroethene	0 5	U
75-34-3 <b></b> -	1.1-Dichloroethane	0.4	U
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1.2-Dichloroethene	0.5	U
594-20-7	2,2-Dichloropropane	0.5	U
74-97-5	Bromochloromethane	0 4	U
67-66-3	Chloroform	0.3	U
71-55-6	1,1,1-Trichloroethane	0.5	U
563-58-6	1.1-Dichloropropene	0 5	U
56-23-5	·Carbon tetrachloride	0 5	U
71-43-2	·Benzene	. 2	i
107-06-2	1.2-Dichloroethane	, 0.5	
79-01-6	Trichloroethene	0.5	U
78-87-5	1,2-Dichloropropane	0 4	U
74-95-3	Dibromomethane	0 5	U
75-27-4	Bromodichloromethane	0 5	U
10061-01-5	cis-1.3-Dichloropropene	0.5	U
108-88-3	Toluene	3	
10061-02-6	trans-1,3-Dichloropropene	0 5	
/9-00-5	1.1.2-Trichloroethane	1 0.51	U
142-28-9	1.3-Dichloropropane	, 0 4	U
127-18-4	Tetrachloroethene	0.5	U
124-48-1	Dibromochloromethane	0.5	U
106-93-4	1.2-Dibromoethane	0 5	U
544-10-5	1-Chlorohexane	0.5	U
l		.1	

EPA SAMPLE NO.

Name: STS CHICAGO

Contract:

WHGLTA036

0

Lab Code:

Case No ·

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-002

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: IOM06

Level (low/med) LOW Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

108-90-7-----Chlorobenzene 0.4 U 630-20-6-----1.1.1.2-Tetrachloroethane\_ 0.5 100-41-4-----Ethylbenzene 136777-612----p.m-Xylene 8 95-47-6-----o-Xylene 100-42-5----Styrene 0.4 75-25-2-----Bromoform 0.5 98-82-8-----Isopropylbenzene 79-34-5-----1,1,2,2-Tetrachloroethane\_ 0.5 108-86-1-----Bromobenzene 0.3 U 96-18-4-----1,2,3-Trichloropropane\_ 0.5 U 103-65-1----n-Propylbenzene 0.9 95-49-8-----2-Chlorotoluene 0 4 Ū 108-67-8-----1,3,5-Trimethylbenzene\_ 0.4 106-43-4----4-Chlorotoluene 0 5 H 98-06-6-----tert-Butylbenzene 0.6 95-63-6-----1,2,4-Trimethylbenzene 2 135-98-8-----sec-Butylbenzene 0.5 541-73-1----1.3-Dichlorobenzene U 99-87-6-----p-Isopropyltoluene U 106-46-7-----1.4-Dichlorobenzene U 104-51-8----n-Butylbenzene U 0 3 0.5 95-50-1----1,2-Dichlorobenzene U 96-12-8-----1,2-Dibromo-3-Chloropropane U 120-82-1----1.2,4-Trichlorobenzene 0.4 U 87-68-3-----Hexachlorobutadiene 0.5 U 91-20-3-----Naphthalene 0.5 87-61-6-----1,2,3-TrichTorobenzene\_ 0.5

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

ĖΡΔ	SAMPLE	NO
$\Box$		110

WHGLTA036

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-002

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: IQM06

Level: (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 05/26/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: \_\_\_ (uL)

Soil Extract Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST, CONC.	Q
1. 2 3 4. 5. 6	UNKNOWN ALKANE UNKNOWN ALKANE SUBST. BENZENE SUBST. BENZENE SUBST. BENZENE	16 93 19 17 28.70 30.05 31 88	7 11 75 20 13	J J J J
8				
14. 15. 16. 17. 18 19 20. 21.				
23. 24. 25 26.				
27. 28. 29. 30.				

EPA SAMPLE NO.

TB051600A

0

D Name: STS CHICAGO

Contract.

Case No.: SAS No.: SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-003

Sample wt/vol: 25.00 (g/mL) ML

Lab Code:

Lab File ID: IOM03

Level: (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

75-71-8-----Dichlorodifluoromethane\_\_\_\_ 0.5 0.5 74-87-3-----Chloromethane 0.5 0.5 75-01-4-----Vinyl chloride\_\_\_\_\_ U 74-83-9-----Bromomethane U 0.5 U 75-00-3------Chloroethane 75-69-4-----Trichlorofluoromethane 0.5 U 0.5 U 75-35-4-----1.1-Dichloroethene 75-09-2-----Methylene chloride 0.5 U 0.5 0.5 0.5 Ú 1634-04-4-----Methyl-tert-Butyl Ether 156-60-5-----trans-1,2-Dichloroethene U U 75-34-3-----1,1-Dichloroethane 108-05-4-----Vinyl Acetate 2 0.5 U U 156-59-2-----cis-1,2-Dichloroethene 594-20-7-----2.2-Dichloropropane\_\_\_\_ 0.5 U 74-97-5-----Bromochloromethane U 0.4 67-66-3-----Chloroform U 0.3 71-55-6-----1,1,1-Trichloroethane 0.5 0.5 U 563-58-6-----1.1-Dichloropropene U 56-23-5-----Carbon tetrachloride 71-43-2-----Benzene U 0.4 107-06-2-----1,2-Dichloroethane\_ U 0.5 79-01-6-----Trichloroethene 0.5 U 78-87-5-----1,2-Dichloropropane  $0.4^{\circ}$ 0.5 74-95-3-----D1bromomethane U 75-27-4-----Bromodichloromethane 0.5 U 0.5 10061-01-5-----cis-1.3-Dichloropropene\_ U 108-88-3------Toluene 10061-02-6-----trans-1.3-Dichloropropene\_ Ú U U 79-00-5-----1,1,2-Trichloroethane 142-28-9-----1,3-Dichloropropane\_\_\_ 0.4 U 0.5 0.5 0.5 127-18-4-----Tetrachloroethene U 124-48-1-----Dibromochloromethane 106-93-4-----1,2-Dibromoethane\_\_\_\_ 544-10-5-----1-Chlorohexane\_\_\_\_ 0.5

EPA SAMPLE NO.

Lab Name: STS CHICAGO

Contract:

TB051600A

Lab Code ·

Case No.:

SAS No :

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-003

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: IQM03

Level: (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed, 05/26/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS: '

(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND	(1
	<del></del>	

108-90-7	45.5.5.4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.	

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB051600A

tab Name: STS CHICAGO Contract:

Case No.: SAS No.: SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-003

Sample wt/vol: 25.00 (g/mL) ML

Lab Code:

Lab File ID: IOM03

Level: (low/med) LOW

Date Received: 05/17/00

% Moisture: not dec. \_\_\_\_\_

Number TICs found: 0

Date Analyzed: 05/26/00

GC Column: CAP ID: 0.53 (mm)

Dilution Factor, 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

### CAS NUMBER COMPOUND NAME RT EST. CONC. 9. 10. 11. 12. 13. 16 17. 18. 19. 20. 26. 27. 28 29. 30.

EPA SAMPLE NO.

EB051600A

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID:

IQM04

Level: (low/med)

Date Received: 05/17/00

LOW

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

75-71-8	CAS NO.	COMPOUND	(ug/L or ug/K		Q
	74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 156-59-2 74-97-5 67-66-3 71-55-6 563-58-6 71-43-2 107-06-2 79-01-6 78-87-5 78-87-5 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 124-48-1 106-93-4	ChloromethaneVinyl chlorideBromomethaneChloroethaneTrichlorofluorI,1-DichloroetMethylene chloroethaneTrans-1,2-DichloroethaneVinyl AcetateVinyl AcetateCis-1,2-DichloroprBromochlorometChloroformI,1-TrichlorCarbon tetrachBenzeneI,2-DichloroprBromodichloromethaneTrichloroethaneTrichloroethaneTrichloroethaneI,2-DichloroprI,2-DichloroprI,2-DichloroprI,2-DichloroprTrichloroethaneTrichloroethaneTrichloroethaneTrichloroethaneTrichloroethaneTrichloroethaneTrichloroethaneTrichloroethane	comethane chene cride cityl Ether cloroethene chane croethane croethane cropane chane cropane	55555555554255445555455555555555555555	

EPA SAMPLE NO.

EB051600A

Lab Name: STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 9A05G305-004

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: IQM04

Lab Code:

Level: (low/med) LOW Date Received: 05/17/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1 0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

108-90-7	45555455535445555 0000000000000000000000	טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
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#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA	SAMPLE	NO

EB	051	60	0A
L	001	v	٠.,١

_ab Name:	STS	CHICAGO	

HICAGO

Case No.:

Contract:

SAS No.:

SDG No., U05305

Matrix. (soil/water) WATER

Level: (low/med) LOW

Lab Sample ID. 9A05G305-004

Sample wt/vol:

Lab Code:

25.00 (g/mL) ML

Lab File ID: IQM04

Date Received, 05/17/00

% Moisture: not dec. \_\_\_\_\_

Number TICs found: 0

Date Analyzed: 05/26/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	RT	EST. CONC.	Q
1	 		
3			
5			
7.			
9			
11.			
13.	 		
15. 16.	 		
18			
20	 		
22.	 		
24			
26			
28.			
30			

EPA SAMPLE NO.

**VBLKHK** 

Lab Code:

Tab Name: STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB164-MB1

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: ZC525

Level: (low/med)

LOW

Date Received: 05/25/00

% Moisture: not dec.

Date Analyzed: 05/25/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

	(49/2 0) 49/		٩
 75-71-8	Dichlorodifluoromethane	0.5	u
74-87-3	Chloromethane	0.5	ŭl
75-01-4	Vinyl chloride	0.5	ŭl
74-83-9	Bromomethane	0.5	ŭl
75-00-3	Chloroethane	0.5	ŭl
75-69-4	Trichlorofluoromethane	0.5	ŪΙ
75-35-4	1,1-Dichloroethene	0.5	ŭl
75-09-2	Methylene chloride	0.5	ŪΙ
1634-04-4	Methyl-tert-Butyl Ether	0.5	Ü
156-60-5	trans-1 2-Dichloroethene	0.5	ŪΙ
75-34-3	1,1-Dichloroethane	0.4	Ū.
108-05-4	Vinyl Acetate	2	ŭl
156-59-2	cis-1.2-Dichloroethene	0.5	ŪΙ
594-20-7	2.2-Dichloropropane	0.5	Ü
74-97-5	Bromochloromethane	0.4	Ŭ
67-66-3	Chloroform	0.3	Ŭ
71-55-6	1.1,1-TrichToroethane	0.5	Ŭ
563-58-6	1,1-Dichloropropene	0.5	Ŭ
56-23-5	Carbon tetrachloride	0.5	Ŭ
71-43-2	Benzene	0.4	Ŭ
107-06-2	1.2-Dichloroethane	0.5	Ŭ
79-01-6	Trichloroethene	0.5	Ū
78-87-5	1,2-Dichloropropane	0.4	Ū
74-95-3	Dibromomethane	0.5	Ū
75-27-4	Bromodichloromethane	0.5	Ū
10061-01-5	cis-1.3-Dichloropropene	0.5	Ū
108-88-3	Toluene	0.5	Ŭ
10061-02-6	trans-1 3-Nichloropropene	0.5	U
/9-00-5	1.1.2-Irichloroethane	0.5	U
142-28-9	I 3-Dichloropropane	0.4	Ū
12/-18-4	Tetrachloroethene	0.5	Ū
124-48-1 <i></i> -	Dibromochloromethane	0.5	Ü
100-93-4	l.Z-Dibromoethane	0.5	
544-10-5	1-Chlorohexane	0.5	ι
		-	
		-·— <del>—</del>	1

EPA SAMPLE NO.

**VBLKHK** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB164-MB1

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: ZC525

Level: (low/med) LOW

Date Received: 05/25/00

% Moisture: not dec.

Date Analyzed: 05/25/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VBLKHK	

'EPA SAMPLE NO.

<b>.</b>				
Tab	Name:	STS	CHICAGO	

Contract:

Lab Code:

Case No.:

SAS No :

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB164-MB1

Sample wt/vol:

25.00 (g/mL) ML

ZC525 Lab File ID:

Level: (low/med)

LOW

Date Received: 05/25/00

% Moisture: not dec.

Date Analyzed: 05/25/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Number TICs found: 0

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
<sup>2</sup> · -		-		
4				
6.		_		
7		_		<u> </u>
9.				
.1				
3.		_		\ <u> </u>
4.5.		_		
.6. <del></del>  -				
17.				
19.		_		
21.				
22		_		
24		_		-
26. <del></del>  -				_
27				-
29				_

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**VBLKRB** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB165-MB1

Sample wt/vol: 25.00 (g/mL) ML

ZB526 Lab File ID:

Level: (low/med)

LOW

Date Received: 05/26/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

75-71-8
544-10-51-Chlorohexane 0.5

**VBLKRB** 

Lab Code:

Lab Name: STS CHICAGO

Contract:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB165-MB1

SAS No.:

Sample wt/vol:

25.00 (g/mL) ML

Case No.:

Lab File ID: ZB526

Level: (low/med) LOW Date Received: 05/26/00

% Moisture: not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

, <del></del>	<u> </u>
108-90-7	0.455.55.5.4.4.5.5.5.5.5.5.5.5.5.5.5.5.5

635 230

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA	SAMPLE	NO
-----	--------	----

Lab Name: STS CHICAGO

Matrix: (soil/water) WATER

Contract:

Case No.: SAS No.: SDG No.: U05305

Lab Code:

Sample wt/vol: 25.00 (g/mL) ML

Lab Sample ID: 80GVB165-MB1

Lab File ID: ZB526

Level: (low/med) LOW

Date Received 05/26/00

% Moisture: not dec \_\_\_\_\_

Number TICs found: 0

Date Analyzed: 05/26/00

GC Column: CAP ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q.
1				
3				
5				
8				
10 11. 12.				<u></u>
13 14.				
15				
18				
20				
22				
25. 26.				
27 . 28 .				
29.				

EPA SAMPLE NO.

**VBLKHKBS** 

Name: STS CHICAGO

Contract.

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB164-MB1S

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: ZD525

Level: (low/med) LOW Date Received: 05/25/00

% Moisture: not dec.

Date Analyzed: 05/25/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO

COMPOLIND

(ug/L or ug/Kg) ug/L

Λ

74-87-3 75-01-4 74-83-9 75-00-3 75-69-4	Chloroethane Trichlorofluorom		12 10 11 13 11	
75-09-2 1634-04-4 156-60-5 156-59-2 594-20-7 71-55-6 563-58-6 71-43-2 79-01-6 78-87-5 75-27-4 10061-01-5	1.1-DichloroetheMethylene chloriMethyl-tert-Butytrans-1.2-Dichloroethe1.1-DichloroetheVinyl Acetatecis-1.2-DichloropropBromochloromethe1.1-Trichloroethe1.1-DichloropropCarbon tetrachloroethe1.2-Dichloroethene1.2-DichloropropDibromomethaneBromodichloromecis-1,3-Dichloro	ene de de de la Ether proethene lane lane ethane bene lane lane lane lane lane lane lane l	11   10   10   10   10   10   10   10	
71-55-6 563-58-6 56-23-5 71-43-2 107-06-2 79-01-6 78-87-5 74-95-3 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 124-48-1 106-93-4	1,1,1-TrichTorog 1,1-Dichloroprop Carbon tetrachloroethoroethoroethoroethoroethoroethoroprop 1,2-Dichloroprop 1,2-Dichloroprop Dibromomethane Bromodichlorome cis-1,3-Dichloro	pene pride  pane thane oropropene ethane pane ne thane	10   12   10   10   10   11   11   11	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**VBLKHKBS** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB164-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: ZD525

Level: (low/med) LOW

Date Received: 05/25/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 05/25/00

Column. (pack/cap) CAP

Dilution Factor: 1 0

CONCENTRATION UNITS.

CAS NO

COMPOUND

(ug/L or ug/Kg) ug/L

0

EPA SAMPLE NO.

**VBLKRBBS** 

Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB165-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: ZC526

Level: (low/med) LOW

Date Received: 05/26/00

% Moisture: not dec. \_\_

Date Analyzed: 05/26/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	CONCENTRATION UNIT (ug/L or ug/Kg) ug	
74-87-3	Dichlorodiflu Chloromethane Vinyl chlorid		11 10 11
74-83-9	Bromomethane Chloroethane		14
75-69-4	Trichlorofluo	romethane	19
75-09-2	Methylene chl	oride	
156-60-5	trans-1,2-Dic 1,1-Dichloroe	hloroethene	10
108-05-4	Vinyl Acetate cis-1.2-Dichl		6
594-20-7 74-97-5	·2,2-Dichlorop ·Bromochlorome	ropane	10
67-66-3 71-55-6	·Chloroform ·1.1.1-TrichTo	roethane	11
56-23-5	l.l-Dichlorop Carbon tetrac		12
107-06-2	Benzene <u>1</u> ,2-Dichloroe	thane	10
78-87-5	Trichloroethe 1.2-Dichlorop	propane	11
75-27-4	Dibromomethar	omethane	12 12 12
108-88-3	cis-1,3-Dichl Toluene		10
79-00-5	trans-1,3-Dic 1,1,2-Trichlo 1,3-Dichloro	proethane	12
12/-18-4 124-48-1	Tetrachloroet	thene	10
' 106-93-4	1,2-Dibromoe	thane 1	12

EPA SAMPLE NO.

Lab Name: STS CHICAGO

Contract:

**VBLKRBBS** 

Lab Code.

Case No.:

LOW

SAS No.:

SDG No.: U05305

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB165-MB1S

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: ZC526

Level: (low/med)

Date Received: 05/26/00

% Moisture not dec.

Date Analyzed: 05/26/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7Chlorobenzene	10
630-20-61.1.1.2-TetrachToroethane	11
1 100 A1 A Cthulbontone	10
100-41-4Ethylbenzene	
136777-612p.m-Xylene	20
95-47-6o-Xy1ene	10
100-42-5Styrene	11
75-25-2Bromoform	13
98-82-8Isopropylbenzene	, 9][
79-34-51.1.2.2-Tetrachloroethane	11
108-86-1Bromobenzene	10
96-18-41,2,3-Trichloropropane	11
103-65-1n-Propy1benzene	9
95-49-82-Chlorotoluene	10
108-67-81,3,5-Trimethy1benzene	10
106-43-44-Chlorotoluene	10
98-06-6tert-Butylbenzene	10
95-63-61,2,4-Trimethylbenzene	10
135-98-8sec-Buty1benzene	9
541-73-11,3-Dichlorobenzene	10
99-87-6p-Isopropyltoluene	<u>'</u>
106-46-71.4-Dichlorobenzene	10
104-51-8n-Butylbenzene	9
95-50-11,2-Dichlorobenzene	10
96-12-81,2-Dibromo-3-Chloropropane_	111
120-82-11,2,4-Trichlorobenzene	
87-68-3Hexachlorobutadiene	10
01-20-2- Markthalone	10 11
91-20-3Naphthalene 87-61-61,2.3-Trichlorobenzene	111
o/-or-o1,2.3-trichiorobenzene	11
	ll

### Severn Trent Laboratories Chicago HPAH ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A05G305

CLIENT ID	SAMPLE :	#	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
WHGLTA037 WHGLTA037 WHGLTA037 WHGLTA036 WHGLTA036 EB051600A EB051600A	001 001 001 001 002 002 002 004 004	01 C1 C2 C1	33333333		05/16/00 05/16/00	05/17/00 05/17/00	05/19/00 05/19/00 05/19/00 05/19/00 05/19/00 05/19/00	
LAB QC:								
BLK BLK BLK BLK	MB1 MB1 MB1 BS MB1 BS	C1 C1	W W W	9AGP0419 9AGP0419 9AGP0419 9AGP0419	N/A N/A N/A N/A	N/A N/A N/A N/A	05/19/00 05/19/00	05/24/00 05/24/00 05/24/00 05/24/00

N N N	Acenaphthene       360 U       NA       NA       8.0         Acenaphthene       67 J       NA       100 J       NA         Fluorene       42 U       NA       NA       100 J       NA         Phenanthrene       130 U       NA       NA       NA       NA         Anthracene       130 U       NA       NA       NA       NA         Fluoranthene       42 U       NA       NA       NA       NA         Pyrene       42 U       NA       NA       NA       NA         Pyrene       53 U       NA       NA       NA       NA         Benzo(a)anthracene       2.6 U       NA       NA       NA       NA       NA         Benzo(b)Fluoranthene       3.6 U       NA       NA       NA       NA       NA         Benzo(k)fluoranthene       3.4 U       NA       NA       NA       NA       NA         Benzo(k)fluoranthene       3.4 U       NA       NA       NA       NA       NA       NA         Benzo(k)fluoranthene       3.4 U       NA       NA	Cust ID: WHGLTA037 WHGLTA0	STL Chicago PAHS 8Y HPLC RFW Batch Number: 9A05G305 Client: AFC001-16BBD Work Order: 60025-001-001-0
		WHGLTA037  001 DL WATER 0 100  100  IRM CONFIRM * * * * * * * * * * * * * * * * * * *	ork Order: 60025-
N N N N N N N N N N N N N N N N N N N	NANANANA 63 	WHGLTA036  002 WATER 1.0 1.0 CONFIRM 71	06/09/00 16:37 <b>©</b> Page: 1

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. N3= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. \*= Outside of EPA CLP QC NS= Not spiked.

C +833	030 2	237
Naphthalene Acenaphthene Acenaphthylene Acenaphthylene Fluorene Phenanthrene Anthracene Fluoranthene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(a)pyrene Benzo(a,h)anthracene Benzo(g,h,i)perylene Indeno(1,2,3-cd)pyrene Indeno(1,2,3-cd)pyrene	Sample Information	RFW Batch Number: 9A05G305
Decafluorobiphenyl Benzo(e)pyrene ne ene ylene ylene ne incarthene uoranthene rene h)anthracene i)perylene i,3-cd)pyrene f not detacted 1- not	Cust ID:  RFW#: Matrix: D.F.: Units:	<u>ber: 9A05G305</u>
76 % 83 % 19 U 19 U 19 U 19 U 0.56 J 6.7 U 6.9 U 2.2 U 2.8 U 0.14 U 0.14 U 0.19 U 0.18 U 0.24 U 0.31 U 0.45 U	EB051600A 004 WATER 1.0 ug/L	Client: AFC
CONFIRM 71 % 81 % NA NA NA NA NA NA NA NA NA NA NA NA NA	EB051600A 004 WATER 1.0 ug/L	STL Ch PAHS BY AFC001-16BBD
56 % 90 % 18 U 18 U 2.1 U 6.4 U 6.6 U 2.7 U 0.13 U 0.18 U 0.17 U 0.23 U 0.23 U 0.23 U 0.43 U	BLK 9AGP0419-MBI WATER 1.0 ug/L	Chicago BY HPLC Wor
CONFIRM 56 % 89 % 18 U 18 U 2.1 U 6.4 U 6.6 U 2.7 U 0.13 U 0.13 U 0.13 U 0.14 U 0.23 U 0.23 U 0.23 U 0.30 U 0.76 U 0.76 U	BLK 9AGP0419-MB1 WATER 1.0	Work Order: 6002!
98 98 98 84 85 84 85 93 93 93 93 93 93 94 95 95 97 97 97 98 98 98 98 98 98 98 98 98 98 98 98 98	BLK BS 9AGP0419-MB1 WATER 1.0	Report Date: 5-001-001-0
CONF IRM 69 · ** 99 ** 87 ** 98 ** 95 ** 96 ** 97 98 ** 98 ** 98 ** 98 ** 97 97 ** 84 ** 84 ** 84 ** 85 ** 86 ** 87 ** 88 ** 8	BLK BS 9AGP0419-MB1 ' WATER 1.0	06/09/00 16:3 <b>2</b> 7
		<i>•</i>

U= Analyzed. not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. \*= Outside of EPA CLP QC

# STL Chicago PAH Case Narrative

AFC001-16BBD RFW# 9A05G305-001, 002 and 004 PAHs

1. STL Chicago used the following HPLC system for analysis of polynuclear aromatic hydrocarbons:

<u>ID#</u>	<u>INSTRUMENT</u>	COLUMN TYPE	<b>DETECTOR</b>
25	SpectraPhysics	C-18 PAH	UV - 254nm
25	SpectraPhysics	C-18 PAH	UV - 260nm
26	SpectraPhysics	C-18 PAH	Fluorescence

- 2. These samples were extracted based on SW846 method 3510. The extracts were analyzed for PAHs (i e. PNAs) based on SW846 method 8310 protocols.
- 3. All required holding times were met for the extraction and analysis.
- 4. The method blank was below the reporting limit for all target compounds.
- 5. The surrogate compounds used for this analysis were Decafluorobiphenyl and Benzo(e)pyrene. All surrogate recoveries were within the required control limits, with the exception of those that were diluted out. All surrogate recoveries are summarized on Form 2E.
- 6. All blank spike recoveries were within control limits and are summarized on Forms 3E.
- 7. A matrix spike and a matrix spike duplicate were not designated on a sample from this SDG.
- 8. All initial and continuing standard calibrations were within control limits with the following exceptions:

The CCV that ran 05/27/00 at 02:04 had Benzo(a)pyrene biased high at 16.0% difference on the Fluorescence detector Benzo(a)pyrene was in control on the UV detector and was not detected in the associated samples.

9. All positive hits were confirmed using a second detector or using a second wavelength.

Linda S. Mackley

Organics Section Manager

6-13-00

Jate



STL Chicago 2417 Bond Street University Park, !L 60466

Tel 708 534 5200 Fax 708 534 5211 www.stl-inc.com

November 30, 2000

Ms Kim Evers HydroGeoLogic, Inc 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE AFC001-16BBD Analytical Report Lot 9A11G926

Dear Ms. Evers:

The enclosed summary report is for the project and lot number listed above. The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations. The EDD and error report will be transferred via E-mail when completed. If you have any questions, please contact me at 708-534-5200

Sincerely,

Severn Trent Laboratories

Donna Ingersoll
Project Manager

sj

Enclosures Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

### Severn Trent Laboratories Chicago INORGANIC ANALYTICAL DATA PACKAGE FOR AFC001-16BBD USGG

LOT # ·9A11G926

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
EB110100							
ARSENIC, TOTAL BARIUM, TOTAL COBALT, TOTAL LEAD, TOTAL	007 007 007 007	W W W	9AGI1203 9AGI1203	11/01/00 11/01/00	11/02/00 11/02/00	11/07/00 11/07/00 11/07/00 11/07/00	11/15/00 11/15/00
LSA1628-2WG02							
ARSENIC, TOTAL BARIUM, TOTAL COBALT, TOTAL LEAD, TOTAL	008 008 008 008	W W W	9AGI1203 9AGI1203	11/01/00	11/02/00 11/02/00	11/07/00 11/07/00 11/07/00 11/07/00	11/15/00 11/15/00

NY CERTIFICATION # 11006

#### Severn Trent Laboratories - Chicago METALS CASE NARRATIVE

Client AFC001-16BBD STL# 9A11G926 SDG#: U11926

WO#. 60025-001-001-0001 Date Rec'd: 11/02/00

1 This narrative covers the analysis of 2 Water samples for following metals:

ICP . .. Ba,Co,Pb **GFAA** As

Method Ref NAS Fort Worth JRB, Texas QAPP

- All analyses were performed within the required holding times
- 3 All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limit
- 4 All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits
- 5 Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits
- Method blank was less than the CRDL б
- 7 No sample from this SDG was designated for Serial Dilution or MS/MSD
- 8 GFAA (Arsenic). Analytical spike recoveries were within control limits
- Please note: The last 6 digits of the client sample ID's were used in all CLP Forms to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP forms. Please refer to the Cover Page of the CLP Forms to correlate the modified sample ID's and to the COC to correlate the Lab ID #'s to the client ID

i S. Iyer ·

Metals Section Manager

635 242	s. epa - Clp Ganic Analyses data pa	CKAGE
Lab Name: STL_CHICAGO		
Lab Code: STL Case No.:	_ SAS No.:	SDG No.:U11926
SOW No.: ILM03		
EPA Sample No110100 _2WG02	Lab Sample ID _9A11G926-0079A11G926-008	
<del></del>		
Vere ICP interelement corrections ap	oplied ?	Yes/No YES
Vere ICP background corrections appl If yes - were raw data generate application of background corre	ed before	Yes/No YES Yes/No NO
Comments:		ros, no no_
		<u> </u>
certify that this data package is conditions of the contract, both techniques than the conditions detailed and this hardcopy data package and in an floppy diskette has been authorized an ager's designee, as verified by the signature:	chnically and for compabove. Release of the the the computer-readabled by the Laboratory the following signature	leteness, for data contained e data submitted Manager or the e.
	COVER PAGE - IN	ILM02.1

EPA SAMPLE 1
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NR

NR

NR

NR

	]	NORGANIC A	l Analyses data s	SHEET	EPA SAMPLE NO.
La ame: STL_C Lab Code: STL_ Matrix (soil/wa Level (low/med)	Cas tter): WATER		Contract: SAS No.:	Lab Samp	110100 SDG No.: U11926 ple ID: 9A11G926-007 ceived: 11/02/00
% Solids: Cor	0.0 .centration		/L or mg/kg dry	v weight)	): UG/L_
	CAS No.	Analyte	Concentration	C Q	M
	7440-36-0 7440-38-2 7440-39-3	Aluminum_Antimony_Arsenic_Barium_Bervllium	1.8	<del></del>	NR NR F P NR

7440-41-7

7440-43-9

7440-62-2

7440-66-6

Beryllium

Vanadium

Cyanide

Zinc

Cadmium

NR 7440-70-2 Calcium NR 7440-47-3 Chromium 2.0 U 7440-48-4 ₽ Cobalt  $N\overline{R}$ 7440-50-8 Copper 7439-89-6 NR Iron 1.5 U F 7439-92-1 Lead NR 7439-95-4 Magnesium NR 7439-96-5 Manganese 7439-97-6 Mercury NR NR 7439-95-4 Molybdenu NR 7440-02-0 Nickel NR 7440-09-7 Potassium NR 7782-49-2 Selenium NR 7440-22-4 Silver NR 7440-23-5 Sodium NR 7440-28-0 Thallium NR 7440-31-5 Tin

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color Before: color After:	COLORLESS COLORLESS	Clarity Before: CLEAR_ Clarity After: CLEAR_	Texture: Artifacts:
'omments:			
		FORM I - IN	ILM02.1

635 244

# 1

EPA	SAMPLE	NO

		INORGANIC A	ANALYSES DATA S	SHE	EET			
						21	WG02	
ab Name: STL_	CHICAGO		Contract:					
ab Code: STL		se No.:	SAS No.	: -		SDG	No.: U11	926
atrix (soil/w					ab Samp		: 9A11G92	
evel (low/med		.C					: 11/02/0	
		_		יע	ate Reci	erveu	. 11/02/0	O
Solids:	0.0	J						
Со	ncentration	Units (ug,	/L or mg/kg dry	<i>7</i>	weight)	: UG/	L_	
	CAS No.	Analyte	Concentration	С	Q	М		
	7429-90-5	Aluminum			<del>-</del>	NR		
	1				_ <del></del>	NR		
	7440-36-0	Antimony_	l <del></del>	=				
	7440-38-2	Arsenic	31.0	B		F_		
	7440-39-3	Barium	263	]_	Ì	P_		
	7440-41-7	Beryllium		_		NR		
	7440-43-9	Cadmium		_		NR		
	7440-70-2	Calcium		}	<u> </u>	NR		
	7440-47-3	Chromium		_		NR		
	7440-48-4	Cobalt	2.0	Ū		P_		
	7440-50-8	Copper		1		NR		
	7439-89-6	Iron		-		NR		
		Lead	1.5	บิ		F		
		Magnesium			\ ——	NR		
		Manganese				NR		
	7439-90-5					NR		
		Mercury	\	-	\	NR		
	7439-95-4	Molybdenu	<u> </u>	-		1 1		
	7440-02-0	Nickel				NR		
		Potassium		-		NR		
		Selenium_		-		NR		
	7440-22-4	Silver		_		NR		
	7440-23-5	Sodium	\	_		NR		
	7440-28-0	Thallium_		_		NR		
	7440-31-5	Tin	.			NR		
	7440-62-2	Vanadium_	\	. _	·	NR		
	7440-66-6_	Zinc _		.	.]	NR		
		Cyanide				NR		
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Color After:	COLORIESS		ty After: CLE	.Δ.F	_		ifacts:	
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Comments:								
LSA1628-2W	302							
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FORM I - IN

ILM02.1

Lab Lot # 94 (6926)  Package Sealed Samples Sealed Yes (No) Received on Ice Samples Intact Yes No Yes No Temperature °C of Cooler	Within Hold Time Presery, indicated (Fes No NA PH Check ok Res Cl <sub>2</sub> Checkok (Fes No NA Yes No COC not present	Additional Analyses / Remarks		Date Received 11 2 60  Courter PK Hand Delivered  Bill of Lading See.
				RECEIVED BY OUT COMPANY COMMENTS
Bill To: Contact Company Address  Phone Fax	THE STATE AND	Ma Gmo		Preservative Key 1 HCi, Cool to 4" 2 H2SA Cool to 4" 3 HN03, Cool to 4" 5 NaOHZa Acetale, Cool to 4" 6 Cool to 4" 7 None
635 245 Contact Company  HTCEE LLP Address // Co. Phone Fax // Co.		Sample ID Date    Sample ID Date		Sediment Sediment Solum Solum Drum Lagu Leachate Wipe
Chicago Laboratory 2417 Bord Street University Park, IL 60466 Phone 708-534-5200 Fax 708-534-5211	e (// //	Laboratory 10	113- 700	Matrix

Res Cl<sub>2</sub> Check ok Yes No (NA Preserv. Indicated (Yes) No NA Samples Sealed Yes (No) Samples Intact Additional Analyses / Remarks 4 18 1ME 50 COC not present Hand Delivered Lab Lot # 94116 926 Bill of Lading See attach Sample Labels and COC Agree of Cooler NIV 635 246 Shaded Areas For Internal 042110 ¥ Within Hold Time Received on Ice Course 7 Package Sealed (Yes ) No Temperature ° Date Received pH Check ok Yes No Yes) No 1 11 - 111 - 11 STL COMPANY RECEIVED BY DA 1.11 11 1.1 RE-EIVED COMMENTS Сопрапу III To∷ Address Phone Fax ₫ H2SO4 Cool to 4\*
HN03, Cool to 4\*
NaOH, Cool to 4\*
NaOHZn Acetate, Cool to 4\*
Cool to 4\* Preservative Key 30 0010 19 7 63 HCI Cool to 4. TIME Comp/Grab Refrg # #/ Cont. Volume Presery Matrix DATE , Time Sampling Date Time DATE. VOA Vial Stenie Plastic Amber Glass Widemouth Glass Other Container Key Report To: 1 + 1 1,200 Company Address COMPANY COMPANY Contact Plastic Phone A ... 1. ... Fax i E-Mari Date Required Hard Copy Project Number ă 7 7 741 Signature Sample ID Client Matrix Key
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
W! = Wipe コートン Committed To Sour Sinces Chicago Laboratory University Park, IL 60466 Phone 708-534-5200 Fax 708-534-5211 へて シー・ナ Project Name Project Location: 2417 Bond Street USM-SM W = Water
S = Soil
SL = Sludge
MS = Miscelfaneous
OL = Oil Sampler Name RELINQUISHED BY RELINQUISHED BY WW = Wastewater Laboratory 800 1,10 Lat PM  $\Box$ 

### Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A11G926

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB110100 MW-10WG13 MW-10WG13 SAV-2WG13 SAV-2WG13 DUP05WG13 DUP05WG13 BGSMW03WG13 BGSMW03WG13 BGSMW06WG13	001 002 002 D1 003 003 D1 004 004 D1 005 005 D1	TREFERENCE	80GVF372 80GVT202 80GVF372 80GVT202 80GVT202 80GVT202 80GVT202 80GVT202 80GVT202	11/01/00 11/01/00 11/01/00 11/01/00 11/01/00 11/01/00 11/01/00 11/01/00	11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00	N/A N/A N/A N/A N/A N/A N/A	11/11/00 11/11/00 11/12/00 11/11/00 11/12/00 11/12/00 11/12/00 11/12/00 11/12/00
EB110100  LAB QC:  VBLKKN VBLKKN VBLKKJ VBLKKJ	MB1 MB1 BS MB1 MB1 BS	W W W	80GVF372 80GVF372 80GVF372 80GVT202 80GVT202	N/A N/A N/A N/A	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A	11/12/00 11/10/00 11/10/00 11/12/00 11/12/00

D Fax	)OC Phone	ر ا ا	Ear			
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	int. COC Phone (Y	Received on Ice		Company Company Company Company	contact Contact	C 2 C 2 A 8 Report To: Shaded Areas For Intern
Tamparature of of Cooler	Yes No	ed or	몽	ဇ္တ	유	15

WW = Wastewater W = Water S = Soil SL = Studge MS = Miscellaneous OL = Oil A = Air	RELINCOISHED BY	RELINGUISHED BY			ω7	006	85	004	w3	2002	100	ID AS	┨	Project Location	11/1/10, 101	Project Name / /,,	1614 11	Sampler Name	Fax 708-534-5211	= (	Chicago Laboratory	Communed to Your Success
Matrix Key SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leachate WI = Wipe O =	/ COMPANY	COMPANY			3771		TO 180 15 15 15 15	1211 F1 ". VV . 13	Strance Al	Pib 121113		Client Sample ID	, , , ,	Dat	1 Courte Min	Project Number	7.7	Signature	= 8	60466 EDO	ratory in the coc	mich in Tike
Container Key 1 Plastic 2 VOA Vial 3 Sterile Plastic 4 Amber Glass 5 Widemouth Glass 6 Other	DATE /	DATE ,			11/11/11/25	7:1	1/1/00 July	11/1/6- 1300	11/1/11 1121	11/1/20 10.		Sampling Date Time	Fax / /	e Required Hard Copy//	1.2.	lumber	11 110	9	E-Mail // 1 / 5	Fax ,	Phone	Concess
Preservative Key  1 HCi Cool to 4*  2 H2SO4 Cool to 4*  3 HNO3, Cool to 4*  4 NaOH, Cool to 4*  5 NaOHZn Acetate, Cool to 4*  6 Cool to 4*  7 Nane	TIME	D/ Take				•	- ' ' -	•	-	L		Com	, n		Preserv ' 3	Volume	#/ Cont.	Refrg#	( 120 mm	"//"	and the state of t	7/
COMMENTS	несемерву ОО	RECEIVED BY MAR Y																	PO# Quate	Fax	Phone	Address
	COMPANY	COMPANY												Sa		년	)	W		Te		D.
Date Received 11 Courier FX Bill of Lading Sex	DATE.	1/h oo										Additional Analyses / Remarks	Yes No CO	Labels and	N N			Within Hold Time   F	.4.4	Temperature °C of	Yes No	
Hand Delivered	TIME	0450										es / Remarks	COC not present	OC Agree	Yes No (NA	Res Cl <sub>2</sub> Check-ok	(Yes) No NA	Presery indicated		of Cooler	(Ves) No	emnles Intact

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Laboratory   g   Client	13:471 2 10:201	Lab PM		Project Location	73 7	Project Name		Sampler Name.	Fax 708-534-5211	Phone 708-534-5200	University Park, IL 60466		Chicago Laboratory Co		Success	2	Hili	9		
nt Sampling	Fax//	, and copy	Hard Conv		i idect idilibei	Driver Minney	- Frankling	Signature	E-Mail	Fax		Phone '			Address	Company		Contact	report to:	
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Shaded Areas For Internal Use Only

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Hand Delivered	Courier TX		-		3 HNO3 Cool to 4* 4 NaOH, Cool to 4*	Sterile Plastic Amber Glass	· A ()	. 0 0	SL = Sludge
1,2,0	Date Received 11		1 1/1/2	COMMENTS		Container Key Plastic VOA Vial	~ ~ 1 < P	Matrix Key SE = Sediment SO = Solid	
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Additional Analyses / Remarks	Additional Ana					Date Time	ole ID	ျွင္လ	3 0
OCC HOL PROGRAM	100				337	1	Client		Laboratory
COC not present	No.			<u>-</u>	Gra		Fax Fax		Lab PM
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Res. Cl <sub>2</sub> Check-ak	pH Check ok				Volume II	- 1	Project Number		Project Name
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Branne indicated	Makin Hald Time		Conc		Refra#		Signature		Sampler Name.
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of Cooler	Temperature °C			Fax	, ,	*	Fax	; IL 60466 14-5200	University Park, IL 60466 Phone 708-534-5200
No No	No.			Phone		Phone '		~	2417 Bond Street
Samales Intact	Received on log			-	, , , , , , , , , , , , , , , , , , , ,	-		33	Chicaño
Yes (No)	Yes No			Address	1	Address		٠,	Committed To Your Success
4116700	Lab Lot # 44 16 16 500		,	Company		Company	_	24	
・ニヽ ひし / :				) !		Contact			

#### Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 – 16BBD STL# 9A11G926 VOA DATA:

- 1. All of the samples were analyzed within the 14-day hold time from the date of collection.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound. At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recoveries were below the QC limits for Methylene chloride and above the QC limits for 1-Chlorohexene in the LCS (Laboratory Control Sample) sample 80GVT202-MB1 BS. The spike recoveries were below the QC limits for Methyl-tert-butyl ether and above the QC limits for 1,1-Dichloropropene, 1-Chlorohexene and 1,3,5-Trimethylbenzene in the LCS sample 80GVF372-MB1 BS. Further corrective action was not performed. These compounds were not detected in the associated samples. All of the other spike recoveries were within the QC limits in the LCS samples.
- 4 Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.
- 5. All of the volatile samples had surrogate recoveries within the QAPP specified QC limits.
- 6. The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The target compounds were quantitated using the initial calibration
- 7 All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding continuing calibration standard
- 8 The water samples were analyzed using a 25-mL purge volume Initial analysis dilutions were performed on the sample 9A11G926-002 (1/25), 003 (1/25) and 004 (1/25). All of the other samples were initially analyzed without dilution. Secondary dilutions for target compounds were performed on the samples 9A11G926-002 (1/250), 003 (1/50), 004 (1/50) and 005 (1/50).

Gregory L/Goodwin

GC/MS Section Manager

11/30/00

Date

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TB110100

1 = b Name: STS CHICAGO

Code: Case No.: SAS No.:

Contract:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-001

Sample wt/vol:

25.00 (g/mL) ML

LOW

Lab File ID: JSW01

Level (low/med)

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

FORM I VOA

1/87 Rev.

EPA SAMPLE NO.

TB110100

Lab Name: STS CHICAGO

Contract<sup>.</sup>

Lab Code

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-001

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW01

Level: (low/med) LOW

% Moisture: not dec. \_\_\_\_\_

Date Received: 11/02/00

Date Analyzed: 11/11/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO COMPOUND (ug/L or ug/Kg) ug/L

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# 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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Lab Name: STS CHICAGO

Contract.

SAS No.:

SDG No.: U11926

Matrix. (soil/water) WATER

Lab Sample ID: 9A11G926-001

Sample wt/vol:

Code:

25.00 (g/mL) ML

Case No.:

LOW

Lab File ID: JSW01

Level: (low/med)

Date Received: 11/02/00

% Moisture: not dec

Date Analyzed: 11/11/00

GC Column · CAP

ID: 0 53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:\_\_\_\_(uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS. Number TICs found: 0 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1 2.				
3 4.				
8				
11 12 13				
14. 15 16.				
17 18				
19		-		
22. 23. 24.				
25.				
27				

EPA SAMPLE NO.

MW-10WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol· 25.00 (g/mL) ML

Lab File ID: JSW02

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture. not dec.

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor: 25 0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

	,		
75-71-8	Dichlorodifluoromethane	12	—— U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl chloride	12	U
74-83-9	Bromomethane	12	Ū
75-00-3	Chloroethane	12	Ŭ
75-69-4	Trichlorofluoromethane	12	Ŭ
75-35-4	1.1-Dichloroethene	12	บี
75-09-2	Methylene chloride	12	Ŭ
1634_04_4	Methyl-tert-Butyl Ether	100	U
156-60-5	trans-1,2-Dichloroethene	12	
75 24 2	1,1-Dichloroethane	101	Ü
100 NE 4	Vinvil Appetate		Ü
100-00-4	Vinyl Acetate	50	U
100-09-2	cis-1,2-Dichloroethene	12	U
394-ZU-/	2,2-Dichloropropane	12	_
/4-9/-5	Bromochloromethane	10	Ļ
0/-00-3	Chloroform	8	Ų
/1-55-6	1,1,1-TrichToroethane	12	Ĺ
563-58-6	1.1-Dichloropropene	12	ļ
56-23-5	Carbon tetrachloride	12	اِ
	Benzene	1100	E
10/-06-2	1.2-Dichloroethane	12	Ų
79-01-6	Trichloroethene	[] 12	l
78-87-5- <b></b>	1,2-Dichloropropane	[] 10	l
74-95-3	Dibromomethane	[] [2]	Į
75 <b>-</b> 27 <b>-</b> 4	Bromodichloromethane	[] 12	U
10061-01-5-	cis-1,3-Dichloropropene	12	Į
108-88-3	Toluene	410	
10061-02-6-	trans-1,3-Dichloropropene	12	
79-00-5	1.1.2-Trichloroethane	12	ţ
142-28-9	1,3-Dichloropropane	10	į
127-18-4	Tetrachloroethene	12	1
124-48-1	Dibromochloromethane		į
100 00 4	1,2-Dibromoethane	12	1
106-93-4	I.Z-DIUFDNOALRANE		

MW-10WG13

' 5 Name: STS CHICAGO

Contract:

Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9AllG926-002

Sample wt/vol 25.00 (g/mL) ML

Làb File ID. JSW02

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column. (pack/cap) CAP

Dilution Factor: 25.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7Chlorobenzene 630-20-61.1.1.2-TetrachToroethane 100-41-4Ethylbenzene 136777-612p.m-Xylene 95-47-6Styrene 100-42-5Styrene 75-25-2Bromoform 98-82-8Isopropylbenzene 79-34-5I.1.2.2-TetrachToroethane 108-86-1Bromobenzene 96-18-4Bromobenzene 96-18-4	10 12 3700 5200 1700 10 12 230 12 8 12 410 10 650 12	
98-06-6tert-Butylbenzene 95-63-61.2.4-Trimethylbenzene 135-98-8sec-Butylbenzene 541-73-11.3-Dichlorobenzene 99-87-6p-Isopropyltoluene 106-46-71.4-Dichlorobenzene 104-51-8	12 2600 20 12 16 8 12 10 12 1100 12	UE U DUUUUEU

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: STS CHICAGO

Contract:

MW-10WG13

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID. JSW02

Level: (low/med) LOW

% Moisture: not dec.

Date Received. 11/02/00

Date Analyzed: 11/11/00

GC Column: CAP ID: 0.53 (mm)

Dilution Factor, 25.0

Soil Extract Volume (uL)

Soil Aliquot Volume. \_\_\_\_(uL)

CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1 2 3 4 5 6 7 8 9 10 11. 12 13 14 15 16 17.	COMPOUND NAME  ===================================	RT 9 72 21 .04 21 63 22 .85 23 .31	240 1700 650 700 1200	J J J
19				
26 27 28. 29				

Name: STS CHICAGO

Contract:

MW-10WG13DL

Code.

Case No.:

SAS No..

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW06

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column: (pack/cap) CAP

Dilution Factor: 250.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L 0

75-71-8	120 120 120 120 120 120 120 120 120 120	
79-01-6Trichloroethene 78-87-51.2-Dichloropropane 74-95-3Dibromomethane 75-27-4Bromodichloromethane 10061-01-5cis-1.3-Dichloropropene	120 100 120 120 120	U U U

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

 $635 \cdot 258$ 

Lab Name: STS CHICAGO

Contract:

MW-10WG13DL

Lab Code.

Case No.: SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol· 25.00 (g/mL) ML

Lab File ID: JSW06

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor 250.0

CONCENTRATION UNITS:

CAS NO

COMPOUND

(ug/L or ug/Kg) ug/L

Q

ı <del></del>		
108-90-7	100 120 3300 5300 1500 100 120 120 120 120 120 120 120 120 1	

## VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

635 259

Name. STS CHICAGO

Contract.

SAV-2WG13

Law Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-003

Sample wt/vol

25.00 (g/mL) ML

Lab File ID

JSW03

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture not dec

Date Analyzed: 11/11/00

GC Column: CAP

ID. 0.53 (mm)

Dilution Factor, 25.0

Soil Extract Volume (uL)

Soil Aliquot Volume. \_\_\_\_(uL)

Number TICs found 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1 2 3. 4.	SUBST BENZENE SUBST. BENZENE UNKNOWN SUBST. INDENE UNKNOWN	23 31 24 25 24 49 25 57 25 85	840 450 320 220 350	J J J
7. 8 9. 10 11.				
12 13 14 15 16.				
18. 19 20 21 22				
23. 24. 25. 26 27.				
29.				

EPA SAMPLE NO

SAV-2WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: Ul1926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-003

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW03

Level: (low/med)

LOW

Date Received. 11/02/00

Q

% Moisture: not dec. \_\_

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor: 25 0

CONCENTRATION UNITS:

CAS NO (ug/L or ug/Kg) ug/L COMPOUND

	ı	
108-90-7Chlorobenzene	10	U
630-20-61,1.1.2-TetrachToroethane	12	ĭil
100-41-4Ethylbenzene	1000	F
136777-612p.m-Xylene	730	-
95-47-6o-Xylene	,12	T)
100-42-5Styrene	10	ĭil
75-25-2Bromoform	12	ŭl
98-82-8Isopropylbenzene	320	Ĭ
79-34-51,1,2,2-Tetrachloroethane	12	<del></del>
108-86-1Bromobenzene	8	ŭl
96-18-41,2,3-Trichloropropane	12	Ŭ
103-65-1n-Propylbenzene	910	-
95-49-8	101	10
108-67-81.3.5-Trimethylbenzene	110	- 1
106-43-44-Chlorotoluene	12	U
98-06-6tert-Butylbenzene	12	U
95-63-61.2,4-Trimethylbenzene	590	
135-98-8sec-Butylbenzene	12	U
541-73-11.3-Dichlorobenzene	12	U
99-87-6p-Isopropyltoluene	12	U
106-46-71.4-Dichlorobenzene	8	U)
104-51-8n-Butylbenzene	12	U)
95-50-11.2-Dichlorobenzene	8	U
96-12-81.2-Dibromo-3-Chloropropane	12	U
120-82-11,2.4-Trichlorobenzene	10	U
87-68-3Hexachlorobutadiene	12	U
91-20-3Naphthalene	600	,
87-61-61.2,3-TrichTorobenzene	12	U
	<u> </u>	

Lab Name: STS CHICAGO

Contract:

SAV-2WG13

L ode:

\_

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9AllG926-003

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW03

Level. (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec

Date Analyzed: 11/11/00

Column. (pack/cap) CAP

Dilution Factor: 25.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

CAS NO.	COMPOUND (dg/)	L Of ug/kg/ ug/L	ч
74-87-3 75-01-4 75-00-3 75-69-4 75-35-4 75-34-3 156-60-5 75-34-3 156-59-2 156-59-2 71-55-6 563-58-6 563-58-6 71-43-2 107-06-2 79-01-6 78-87-5 74-95-3 10061-01-5 10061-01-5 10061-01-5 10061-02-6 127-18-4 124-48-1 106-93-4	1.1.1-TrichToroethane1.1-DichToropropeneCarbon tetrachTorideBenzene1.2-DichToroethaneTrichToroethene1.2-DichToropropaneDibromomethaneBromodichToromethanecis-1.3-DichToropropa	e	12 U U U U U U U U U U U U U U U U U U U

SAV-2WG13DL

Lab Name. STS CHICAGO

Contract.

Lab Code:

Case No.:

LOW

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9AllG926-003

Sample wt/vol. 25.00 (g/mL) ML

Lab File ID: JSW07

Level: (low/med)

Date Received: 11/02/00

% Moisture: not dec

Date Analyzed. 11/12/00

Column (pack/cap) CAP

Dilution Factor 50.0

CONCENTRATION UNITS:

CAS NO. COMPOLIND (ua/L or ua/Ka) ua/L

0

CAS NU.	COMPOUND	(ug/L or u	g/kg) ug/L		Ų
74-87-3 75-01-4 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-59-2 156-59-2 156-59-2 156-59-2 156-59-2 156-23-5 71-55-6 71-55-6 71-55-6 71-55-6 71-43-2 107-06-2 79-01-6 78-87-5 107-06-2 108-88-3 10061-01-5- 108-88-3 10061-02-6- 79-00-5 142-28-9 124-48-1 124-48-1 106-93-4	DichlorodifluctionsChloromethaneVinyl chlorideBromomethaneNethoro	romethane chene oride utyl Ether aloroethene thane ropane thane ropane thane ne ropane e methane oropropene hloropropene hloropropene hloropropene hloropropene chene oropane chene chene chene chene chane		255555555550055501555505502555555555555	

'> Name: STS CHICAGO

Contract:

SAV-2WG13DL

Code ·

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-003

Sample wt/vol· 25.00 (g/mL) ML

Lab File ID: JSW07

Level· (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 50.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L Q

108-90-7Chlorobenzene 630-20-61.1.1.2-Tetrachloroethane 100-41-4Ethylbenzene 136777-612p.m-Xylene 95-47-6	20 25 860 25 25 20 25	UUUUUUUUUUUUU
98-82-8	25 25 15 25 20 20 25 25 25 25 25 25 25 25 25 25 25 25 25	
91-20-3Naphthalene 87-61-61.2.3-Trichlorobenzene	25 25	U U

DUP05WG13

Lab Name: STS CHICAGO

Contract.

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol· 25 00 (g/mL) ML

Lab File ID: JSW04

Level (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor: 25.0

CONCENTRATION UNITS:

CAS NO. COMPOLIND (ua/f or ua/Ka)  $ua/f \cdot 0$ 

CAS NO.	COMPOUND	(ug/L or l	ig/kg) ug/L	•	Ų
74 <b>-</b> 87 <b>-</b> 3	Dichlorodifluor Chloromethane	romethane		12 12	U
75-01-4 <b>-</b> -	Vinyl chloride	<u>-</u>	<u>_</u> }	12	U
/4-83 <b>-</b> 9 <b></b>	Bromomethane	_	_	12	IJ
75-UU-3 75 60 1	Chloroethane			12	U
75-09-4	Trichlorofluoro	methane	_	12 12	U) U
75-09-2	Methylene chlor	1616	_	12	ŭl
1634-04-4	Methyl-tert-But	vl Fther	<u>-</u>	180	o o
156-60-5	trans-1,2-Dich	loroethene	-	12	וט
75-34 <b>-</b> 3	1.1-Dichloroeth	nane	<del></del>	10	ŭl
108 <b>-</b> 05-4	Vinyl Acetate	_	<u> </u>	50	U
156-59-2	cis-1,2-Dichloi	roethene	<u> </u>	12	U
594-20-7	2,2-Dichloropro	opane	_	12	U
/4-9/-5	Bromochlorometh	nane	_	10	U
	Chloroform		i	8	IJ
71-33-0 563-58-6	1.1,1-Tric <del>hlor</del> 1.1-Dichloropro	Dethane	<u>-</u>	12 12	U
56-23-5	Carbon tetrach	loride	—]	12	ŭl
71-43-2	Benzene	101 1dC	<b>-</b>	720	ŭ,
	<b>-</b> -1,2-DichToroet	nane		12	
79-01-6 <b>-</b> -	Trichloroethen	e		12	Ü
78-87 <b>-</b> 5 <b></b>	1,2-Dichloropr	opane	_	10	U
74-95-3 <b></b>	Dibromomethane	·		12	U
/5-27-4	Bromodichlorom	ethane		12	U
10061-01-5	<u>c</u> iṣ-1,3-Dıchlo	ropropene		12	U
108-88-3	loluene	T		22	
10001-02-0 7900 5	trans-1.3-Dich	loropropene_		12	U
142-28-9	1,1,2-Trichlor 1,3-Dichloropr	opane	<u></u>	12 10	U  U
127-18-4	Tetrachloroeth	oparie ene	—	12	ŭ
124-48-1	Dibromochlorom	ethane	<del></del> {	12	ŭl
106-93-4	1.2-Dibromoeth	ane		12	Ŭ
544-10-5	1-Chlorohexane	- <u>-</u>	_	12	Ŭ

ורים Name: STS CHICAGO

Contract:

DUP05WG13

Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW04

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor: 25 0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0 108-90-7-----Chlorobenzene 10 630-20-6----1.1.1.2-TetrachToroethane 12 100-41-4-----Ethylbenzene\_\_\_\_ E 1100 136777-612----p.m-Xylene 95-47-6-----o-Xylene 780 12 10 U U 12 98-82-8-----Isopropylbenzene 330 79-34-5-----1.1,2,2-Tetrachloroethane\_ 12 U 108-86-1-----Bromobenzene U 8 96-18-4-----1,2,3-Trichloropropane 12 U 103-65-1----n-Propylbenzene 95-49-8-----2-Chlorotoluene 940 10 108-67-8-----1,3,5-Trimethylbenzene\_\_\_ 110 106-43-4------4-Chlorotoluene U 12 98-06-6-----tert-Butylbenzene 12 U 95-63-6-----1,2,4-Trimethylbenzene\_\_\_ 610 135-98-8-----sec-Butylbenzene U 12 541-73-1-----1.3-Dichlorobenzene 12 U 99-87-6-----p-Isopropyltoluene\_ 6 J 106-46-7-----1,4-Dichlorobenzene\_ 8 U 104-51-8----n-Butylbenzene U 12 95-50-1-----1,2-Dichlorobenzene 96-12-8-----1,2-Dibromo-3-Chloropropane 120-82-1-----1,2,4-Trichlorobenzene U 12 U 10 U 87-68-3-----Hexachlorobutadiene 12 U 91-20-3------Naphthalene 700 87-61-6-----1,2,3-Trichlorobenzene 12

#### VOLATILE ORGANICS ANALYSIS DATA SHEET 635 266 TENTATIVELY IDENTIFIED COMPOUNDS

DUP05WG13

.ab Name: STS CHICAGO

Contract:

\_ab Code:

Case No.:

SAS No..

SDG No.: U11926

1atrix (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

JSW04 Lab File ID:

\_evel: (low/med) LOW

Date Received: 11/02/00

6 Moisture: not dec

Date Analyzed: 11/11/00

3C Column. CAP ID. 0.53 (mm)

Dilution Factor: 25.0

Soil Extract Volume (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (uq/L or ug/Kg) ug/L

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1 2 3 4 5. 6 7. 8 9 10. 11. 12 13 14 15 16 17. 18 19. 20 21. 22.	COMPOUND NAME  SUBST. BENZENE SUBST. BENZENE SUBST. INDENE UNKNOWN	RT 23 31 24 24 24 25 56 25 .86	910 470 350 230 370	J J
23 24. 25 26				
25				

DUP05WG13DL

Lab Code:

Name: STS CHICAGO

Contract:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

Case No.:

Lab File ID: JSW08

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 50.0

CONCENTRATION UNITS:

CAS NO COMPOUND (ug/L or ug/Kg) ug/L 0

EPA SAMPLE NO.

DUP05WG13DL

Lab Name: STS CHICAGO

Contract.

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID:

JSW08

Level

(low/med) LOW Date Received: 11/02/00

% Moisture: not dec. \_

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor. 50.0

CONCENTRATION UNITS

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

ı <del></del>		T	<del></del> ,
108-90-7	Tetrachloroethane zene Tetrachloroethane Tetrachloroethane Zene Tetrachloroethane Zene Tetrachloroethane Zene Tetrachloropropane Tetrachloropropane Totloropropane Totloropropane Totloropropane Totloropropane Totlorobenzene	20 25 800 25 25 25 25 25 25 25 25 25 25 25 25 25	מטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט

BGSMW03WG13

Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-005

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW11

Level (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor, 1.0

CONCENTRATION UNITS:

CAS NO COMPOUND (ua/L or ua/Ka) ua/L 0

EPA SAMPLE NO.

BGSMW03WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: Ul1926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-005

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW11

Level: (low/med)

LOW

Date Received. 11/02/00

% Moisture: not dec

Date Analyzed 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7	0.4 0.5 20 54 3 0.4 0.5 53 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
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#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 271.

Name: STS CHICAGO

Contract:

BGSMW03WG13

La. Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-005

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW11

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture not dec

Date Analyzed: 11/12/00

GC Column CAP

ID. 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume. (uL)

Soil Aliquot Volume: \_\_\_(uL)

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1	UNKNOWN UNKNOWN ALKENE SUBST. BENZENE SUBST BENZENE SUBST. BENZENE	3 22 6 77 18.03 19.07 20 46	8 16 400 120 140	J J J
8 9. 0. 1. 2.				
4				
20 21 22 22 23 24				
25 26. 27. 28.				

EPA SAMPLE NO.

BGSMW03WG13DL

Lab Name: STS CHICAGO Contract

Lab Code: Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

· Lab Sample ID: 9A11G926-005

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: JSW09

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor, 50.0

CONCENTRATION UNITS:

CAS NO	COMPOUND	(ug/L or	ug/Kg) ug/L		Q
74-87-3 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-59-2 156-59-2 156-59-2 67-66-3 71-55-6 71-43-2 107-06-2 79-01-6 79-01-6 79-01-6 79-01-6 108-88-3 108-88-3 108-88-3 10061-01-5 108-88-3 10061-02-6 127-18-4 124-48-1 106-93-4	1,2-DichloroeTrichloroethe1,2-DichloropDibromomethanBromodichlorocis-1,3-Dichl	romethane_thene_oride_utyl Ether_nloroethene_thane_oroethene_ropane_thane_ropene_hloride_thane_oropane_emethane_oropane_emethane_oropane_hene_omethane_oropane_hene_omethane_oropane_hene_omethane_oropane_hene_omethane_oropane_hene_oroethane_oropane_hene_oroethane_oropane_hene_oroethane_oropane_hene_oroethane_oropane_hene_oropane_hene_oropane_hene_oroethane_oropane_hene_oroethane_oropane_hene_oropane_hene_oroethane_oropane_hene_oropane_hene_oroethane_oropane_hene_oropane_oropane_hene_oropane_oropane_hene_oropane_oropane_oropane_oropane_oropane_oropane_oropane_oropane_oropane_oropane_or	=       	25 25 25 25 25 25 25 25 25 20 25 20 25 20 25 20 25 20 25 20 25 20 25 25 25 25 25 25 25 25 25 25 25 25 25	

⊾e: STS CHICAGO

Contract:

BGSMW03WG13DL

Case No.:

SAS No.:

SDG No.: U11926

trix (soil/water) WATER

Lab Sample ID 9A11G926-005

mple wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW09

·vel· (low/med) LOW

Date Received: 11/02/00

Moisture: not dec.

Date Analyzed: 11/12/00

lumn (pack/cap) CAP

Dilution Factor, 50.0

CONCENTRATION UNITS.

CAS NO

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7	20 25 25 25 25 25 25 25 110 20 25 25 25 25 25 25 25 25 25 25 25 25 25	
95-50-11.2-Dichlorobenzene	15 25	U

BGSMW06WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-006

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID. JSW12

Level (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

		CONCENTRATION	UNITS	
CAS NO.	COMPOUND	(ug/L or ug/Kg	ı) ug/L	Q

75-71-8	555555555554255435555655455555545555 00000000000000000000	
---------	--	--

BGSMW06WG13

Name: STS CHICAGO

Contract:

Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Sample wt/vol: 25.00 (g/mL) ML

Lab Sample ID: 9A11G926-006

Lab File ID: JSW12

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS MO

COMPORING

108-90-7
1 <u></u>

c	2	5	2	7	F.
P-1	•	٠,			,,

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BGSMW06WG13

Lab Name: STS CHICAGO

Matrix: (soil/water) WATER

Contract:

SDG No.: Ul1926

Lab Code:

Case No.:

SAS No.:

25.00 (g/mL) ML

Lab Sample ID: 9A11G926-006

Sample wt/vol.

Lab File ID:

JSW12

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec

Date Analyzed 11/12/00

GC Column CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume (uL)

Soil Aliquot Volume (uL)

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST	CONC	Q
1 2 3 110-54-3 4 5 6.	UNKNOWN UNKNOWN HEXANE UNKNOWN UNKNOWN	3.23 5.45 5.87 20.46 23.55		1 2 26 2 4	J NJ J
7. 8. 9 10					
12. 13 14. 15. 16 17					
18. 19. 20 21 22 23					
24 25 26					
28. 29. 30					-

1B VOLATILE ORGANICS. ANALYSIS DATA SHEET

EB110100

Name: STS CHICAGO

Contract:

635 277

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW05

Level: (low/med) LOW

% Moisture: not dec.\_\_\_\_ dec.

Date Received: 11/02/00 Date Extracted: 11/12/00

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/12/00

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

75-71-8	5.5.5.5.5.5.5.5.4.2.5.5.4.3.5.5.5.4.5.5.5.5.5.5.5.5.5.5.5.5	

### 635 278 2/8 1C VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB110100

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW05

Level: (low/med)

Date Received: 11/02/00

% Moisture. not dec.\_\_\_\_ dec.\_\_\_

Date Extracted 11/12/00

Extraction: (SepF/Cont/Sonc) CONT

LOW

Date Analyzed: 11/12/00

GPC Cleanup: (Y/N) N

pH: 7.0

Dilution Factor: 1 0

CONCENTRATION UNITS.

CAS NO

COMPOUND

(ug/L or ug/Kg) ug/L

10061-02-6trans-1.3-Dichloropropene 79-00-51.1.2-Trichloroethane 142-28-91.3-Dichloropropane 127-18-4Tetrachloroethene 124-48-1Dibromochloromethane 106-93-41.2-Dibromoethane 544-10-5Chlorobenzene 630-20-61.1.1.2-Tetrachloroethane 100-41-4Ethylbenzene 136777-612p.m-Xylene 95-47-6Styrene 75-25-2Bromoform 98-82-8Isopropylbenzene 79-34-5Isopropylbenzene 96-18-4	0.5.4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.	
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# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

635 279

ame: STS CHICAGO

Contract:

EB110100

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID:

JSW05

Level: (low/med) LOW

Date Received, 11/02/00

% Moisture: not dec. dec.

Date Extracted: 11/12/00

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/12/00

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.0

CONCENTRATION UNITS

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

106-46-71,4-Dichlorobenzene 104-51-8n-Butylbenzene 95-50-11,2-Dichlorobenzene 96-12-81,2-Dibromo-3-Chloropropane 120-82-11,2,4-Trichlorobenzene 87-68-3Hexachlorobutadiene 91-20-3Naphthalene 87-61-61,2,3-Trichlorobenzene	0.3 0.5 0.3 0.5 0.4 0.5 0.5	U U U U
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ab	Name:	STS	CHICAGO
_ ~~	nunc.	919	OTT OF IGO

Contract:

EB110100

Lab Code:

Case No.:

LOW

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW05

Level: (low/med)

Date Received: 11/02/00

% Moisture decanted (Y/N)

Date Extracted.11/12/00

Concentrated Extract Volume: (uL)

Date Analyzed 11/12/00

Injection Volume: (uL)

Dilution Factor 1.0

GPC Cleanup. (Y/N) N pH: 7.0

Number TICs found 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST	CONC	Q
1 2. 110-54-3 3. 4. 5. 6. 7 8. 9. 0. 1	UNKNOWN ALKANE HEXANE	5.45 5.87		6 120	===== J
3 4. 5. 6. 7. 8. 9 0.					
2					

Name. STS CHICAGO

Contract.

**VBLKKJ** 

Law Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID. 80GVT202-MB1

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: SA1112

Level: (low/med) LOW

Date Received: 11/12/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND

Q (ug/L or ug/Kg) ug/L

	(43, 2 0.	<u></u>	
75-71-8Dichl	orodifluoromethane	0.5	U
174-87-3Chlor	omethane	0.5	U
75-01-4Vinyl	chlorid <u>e</u>	0 5	U
74-83-9Bromo	methane	0 5	U
75-00-3Chlor	oethane	<u> </u>	U
75-69-4Trich	lorofluoromethane	<u> </u>	U
75-35-41.1-D	nchloroethene	<u> </u>	U}
75-09-2Methy	lene chloride	0.5	U
1634-04-4Methy	1-tert-Butyl Ether	<u> </u>	U
156-60-5trans	-1,2-Dichloroethene	0.5	U
75-34-31.1-D	nchloroethane	0.4	U
108-05-4Vinyl	Acetate	2	U
156-59-2cis-1	.2-Dichloroethene	0.5	U
594-20-72,2-D	nchloropropane	0.5	U
74-97-5Bromc	chloromethane	0.4	U
67-66-3Chlor	roform	0 3	U
71-55-61.1.1	Trichloroethane	0.5	U
563-58-61.1-0	Dichloropropene	0.5	ן ט
56-23-5Carbo	on tetrachlorid <del>e</del>	0 5	υl
71-43-2Benze	ene	0 4	U
107-06-21,2-[	Dichloroethane	0.5	U
79-01-6Trich	nloroethene	0.5	U
1 78-87-51,2-[	Dichloropropane	0 4	
74-95-3Dibro	omomethane	<u> </u>	U
75-27-4Bromo	odichlorom <u>ethane</u>	0.5	U
10061-01-5cis-1	l.3-Dichloroprop <del>ene</del>	<del></del>   0.5	
108-88-3Tolue	ene	0.5	
10061-02-6trans	s-1,3-Dichloropropene	<del></del>   0.5	
79-00-51.1.	2-Trichloroethane	0.5	U
142-28-91.3-	Dichloropropane	0.4	U
127-18-4Tetr	achloroethene	0.5	U
124-48-1Dibr	omochlorometh <u>ane</u>	0.5	l U
1 106-93-41.2-	Dibromoethane	<del></del>   0.5	·  Ui
544-10-51-Ch	lorohexane	<u> </u>	U'

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## 635 282 282 1A VOLATILE ORGANICS ANALYSIS DATA SHEET .

25.00 (g/mL) ML

EPA SAMPLE NO.

**VBLKKJ** 

Lab Name: STS CHICAGO

Contract:

SDG No.: U11926

Lab Code:

Case No.:

SAS No.:

Matrix (soil/water) WATER

Lab Sample ID. 80GVT202-MB1

Sample wt/vol:

Lab File ID: SA1112

Level: (low/med) LOW

Date Received: 11/12/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 108-86-1 108-86-1 103-65-1 95-49-8 106-43-4 95-63-6 135-98-8 106-46-7 104-51-8 104-51-8 104-51-8 104-82-1	StyreneBromoformIsopropylbenzene1.1.2.2-TetrachloroethaneBromobenzene1.2.3-Trichloropropane1.3.5-Trimethylbenzene1.3.5-Trimethylbenzene4-Chlorotoluenetert-Butylbenzene1.2.4-Trimethylbenzene1.3-Dichlorobenzene1.3-Dichlorobenzene1.4-Dichlorobenzene1.4-Dichlorobenzene1.4-Dichlorobenzene1.2-Dichlorobenzene	4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	
95-50-1   96-12-8   120-82-1   87-68-3   91-20-3	1.2-Dichlorobenzene 1.2-Dibromo-3-Chloropropane	0.5	U U U

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 283

lab Name: STS CHICAGO

Contract:

**VBLKKJ** 

Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVT202-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID:

SA1112

Level: (low/med) LOW

Date Received: 11/12/00

% Moisture not dec. \_\_\_\_\_

Date Analyzed: 11/12/00

GC Column CAP

ID: 0.53 (mm)

Dilution Factor: 1 0

Soil Extract Volume: \_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

Number TICs found, 0

CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
======================================	=======================================	=======	=======================================	====
2		-	<u> </u>	
3		<u> </u>	<del>-</del>	
4				
·				
7	<del></del>	_		
8:		—  <b></b> -	<u> </u>	
9		— <u>[</u> ———		
0				
1				
2		[		
4.————————————————————————————————————	<del>-</del>			·
5		_		·
6		_		·
7		<b>-</b>		\ <u> </u>
8				
9.				. <b> </b> _
1				
2 <del></del>  -	<del></del>	<u> </u>	· <del> </del>	-
3				-
4.				
5.				_
7			-	-
8		_	-	-\
9	<del></del>		- <del> </del>	-
n ————————————————————————————————————			-	-1

VBLKKN

Lab Name, STS CHICAGO

Contract.

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID 80GVF372-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: PE110

Level. (low/med) LOW

Date Received: 11/10/00

% Moisture. not dec

Date Analyzed: 11/10/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CAS NO	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q

75-71-8	55555555554255435555455455555 0000000000000000000000	
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

635 285

**VBLKKN** 

Lab Code.

Name. STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

. . . . . . . .

Lab Sample ID: 80GVF372-MB1

Sample wt/vol: 25.00 (g/mL) ML

LOW

Lab File ID: PE110

Level. (low/med)

Date Received: 11/10/00

% Moisture: not dec

Date Analyzed: 11/10/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

COMPOUND (ug/L or ug/Kg) ug/L CAS NO. 0

108-90-7	45.55.54.55.53.54.55.55.55.55.55.55.55.55.55.55.55.55.	
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# VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VBLKKN

Lab Name: STS CHICAGO

Contract:

lab Code:

Case No : SAS No :

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVF372-MB1

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: PE110

Level (low/med) LOW

Date Received: 11/10/00

% Moisture not dec.

Date Analyzed: 11/10/00

GC Column: CAP

ID 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume. \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1				
4				
7 8 9				
10 11 12			· ·	
13 14 15				
16. 17. 18.				
19 20. 21.				-
21. 22 23. 24. 25 26 27 28. 29. 30				
25 26 27				
28. 29. 30				

**VBLKKJBS** 

Name: STS CHICAGO Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix. (soil/water) WATER

Lab Sample ID: 80GVT202-MB1S

Sample wt/vol. 25.00 (g/mL) ML Lab File ID:

SC1112

Level (low/med) LOW

Date Received: 11/12/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor, 1.0

CONCENTRATION UNITS

CAS NO. COMPOU	ND (ug/L or ug/l	
75-71-8	methane chloride ethane chloroethene ene chloride -tert-Butyl Ether 1,2-Dichloroethene chloroethane Acetate 2-Dichloroethene chloropropane hloromethane form Trichloroethane chloropropene tetrachloride echloropropane hloromethane chloropropane hloromethane chloropropane hloromethane chloropropane hloromethane chloropropane hloromethane chloropropane hloromethane chloropropane hloropropane chloropropane chloropropane chloropropane chloropropane chloropropane	8

#### 635 288 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**VBLKKJBS** 

Lab Name. STS CHICAGO

Contract:

Lab Code:

Case No.:

LOW

SAS No.:

SDG No. · U11926

Matrix (soil/water) WATER

Lab Sample ID: 80GVT202-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: SC1112

Level: (low/med)

Date Received: 11/12/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 108-86-1 96-18-4 103-65-1 95-49-8 106-43-4 98-06-6 95-63-6 135-98-8 541-73-1	StyreneBromoformIsopropylbenzene1.1.2.2-TetrachloroethaneBromobenzene1.2.3-Trichloropropanen-Propylbenzene2-Chlorotoluene1.3.5-Trimethylbenzene4-Chlorotoluenetert-Butylbenzene1.2.4-Trimethylbenzene1.3-Dichlorobenzene	999199998999109109999
108-86-1 96-18-4 103-65-1	Bromobenzene 1,2,3-Trichloropropane n-Propylbenzene	9
95-49-8 108-67-8 106-43-4	2-Chlorotoluene 1,3,5-Trımethylbenzene 4-Chlorotoluene	10
95-63-6   135-98-8	1,2,4-Trimethylbenzene sec-Butylbenzene	10
99-87-6		10
95-50-1 96-12-8 120-82-1	1.2-Dichlorobenzene 1.2-Dibromo-3-Chloropropane 1,2.4-Trichlorobenzene	9
87-68-3 91-20-3	Hexachlorobutadiene Naphthalene 1.2.3-Trichlorobenzene	10

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

635,289

**VBLKKNBS** 

Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 80GVF372-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: PF1110

Level: (low/med) LOW

Date Received: 11/10/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed 11/10/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

	(49, 2 5, 49,	
74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 156-59-2 156-3-58-6 563-58-6 563-58-6 71-55-6 71-43-2 107-06-2 78-87-5 78-87-5 108-88-3	1.2-Dichloroethane	7 8 10 10 10 10 8 8 9 10 10 11 11 10 9 11 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10
79-01-6 78-87-5 74-95-3 15-27-4 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 127-18-4 124-48-1 106-93-4	Trichloroethene1,2-DichloropropaneDibromomethaneBromodichloromethanecis-1,3-Dichloropropene	11     10     10     10

EPA SAMPLE NO.

**VBLKKNBS** 

Q

Lab Name: STS CHICAGO

CHICAGO Contract:

•••

SDG No.: U11926

Matrix. (soil/water) WATER

Lab Sample ID: 80GVF372-MB1S

Sample wt/vol:

Lab Code.

25.00 (g/mL) ML

Lab File ID: PF1110

Level· (low/med)

LOW

Date Received: 11/10/00

% Moisture not dec

Date Analyzed: 11/10/00

Column: (pack/cap) CAP

Dilution Factor 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

Case No.: SAS No.:



STL Chicago

2417 Bond Street University Park, IL 60466

Tel 708 534 5200 Fax 708 534 5211 www.stl-nc.com

November 30, 2000

Ms. Kim Evers HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-16BBD Analytical Report Lot 9A11G935

Dear Ms Evers

The enclosed summary report is for the project and lot number listed above. The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations. The EDD and error report will be transferred via E-mail when completed. If you have any questions, please contact me at 708-534-5200.

Sincerely,

Severn Trent Laboratories

Donna Ingersoll Project Manager

sj

Enclosures: Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

### Severn Trent Laboratories Chicago INORGANIC ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A11G935

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
WITCTA043WG01  SILVER, TOTAL ALUMINUM, TOTAL ARSENIC, TOTAL BARIUM, TOTAL BERYLLIUM, TOTAL CALCIUM, TOTAL CADMIUM, TOTAL COBALT, TOTAL CHROMIUM, TOTAL COPPER, TOTAL IRON, TOTAL MERCURY, TOTAL MERCURY, TOTAL MERCURY, TOTAL MERCURY, TOTAL MERCURY, TOTAL MERCURY, TOTAL MAGNESIUM, TOTAL MAGNESIUM, TOTAL MOLYBDENUM, TOTAL SODIUM, TOTAL NICKEL, TOTAL LEAD, TOTAL ANTIMONY, TOTAL SELENIUM, TOTAL THALLIUM, TOTAL VANADIUM, TOTAL ZINC, TOTAL	O06 O06 O06 O06 O06 O06 O06 O06	E	9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI239 9AHG239 9AHG239 9AHG239 9AHG239 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203	11/02/00 11/02/00	11/03/00 11/03/00	11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00	11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/07/00 11/07/00 11/07/00 11/07/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00
WITCTA042WG01  SILVER, TOTAL ALUMINUM, TOTAL ARSENIC, TOTAL BARIUM, TOTAL BERYLLIUM, TOTAL CALCIUM, TOTAL	007 007 007 007 007 007	W	9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203	3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00	) 11/03/00 ) 11/03/00 ) 11/03/00 ) 11/03/00 ) 11/03/00	) 11/07/00 ) 11/07/00 ) 11/07/00 ) 11/07/00 ) 11/07/00	) 11/15/00 ) 11/15/00 ) 11/15/00 ) 11/15/00 ) 11/15/00 ) 11/15/00
CADMIUM. TOTAL	007	W	9AG1120	11/02/01 ک	1 11/03/0	0 11/0//00	0 11/15/00

### Severn Trent Laboratories Chicago INORGANIC ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # 9A11G935

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
COBALT. TOTAL CHROMIUM. TOTAL COPPER, TOTAL IRON, TOTAL MERCURY. TOTAL MAGNESIUM, TOTAL MANGANESE, TOTAL MOLYBDENUM, TOTAL SODIUM. TOTAL NICKEL, TOTAL LEAD, TOTAL ANTIMONY, TOTAL SELENIUM, TOTAL THALLIUM. TOTAL VANADIUM. TOTAL ZINC. TOTAL	007 007 007 007	W W W W W	9AGF0380 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGF0380 9AGF0380 9AGF0380 9AGF0380 9AGF0380	11/02/00 11/02/00 11/02/00 11/02/00	11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00	11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00	11/21/00 11/15/00 11/15/00 11/07/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/15/00 11/09/00 11/16/00 11/15/00
<sup>5</sup> B110200							
ALUMINUM, TOTAL ALUMINUM, TOTAL ARSENIC, TOTAL BARIUM, TOTAL BERYLLIUM, TOTAL CALCIUM, TOTAL CADMIUM, TOTAL COBALT, TOTAL COPPER, TOTAL IRON, TOTAL MERCURY, TOTAL POTASSIUM, TOTAL MAGNESIUM, TOTAL MANGANESE, TOTAL MOLYBDENUM, TOTAL SODIUM, TOTAL NICKEL, TOTAL ANTIMONY, TOTAL ANTIMONY, TOTAL	008 008 008 008 008 008 008 008 008	ZZZZZZZZZZZZZZZZZZZZZZZ	9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203 9AGI1203	11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00 3 11/02/00	11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00	11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00 11/07/00	11/15/00 11/15/00

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### Severn Trent Laboratories Chicago INORGANIC ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # '.9A11G935

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
SELENIUM. TOTAL	008	W	9AGF0380	11/02/00	11/03/00	11/07/00	11/09/00
THALLIUM, TOTAL	008	W	9AGF0380	11/02/00	11/03/00	11/07/00	11/16/00
VANADIUM, TOTAL	008			11/02/00			
ZINC, TOTAL	008	W	9AGI1203	11/02/00	11/03/00	11/07/00	11/15/00

NY CERTIFICATION # 11006

WW = Wastewater W = Water S = Soil SL = Sludge MS = Miscellaneous QL = Qif A = Air	RELINQUISHED BY		800	700	906	074-X	2 C	250	202	200	200	00	Laboratory D	Lab PM	ocation.	Crous "	Project Name:	KENT DUNIN	밁	Phone: 708-534-5200 Fax 708-534-5211	2417 Bond Street University Park, IL 60466	Chicago Labo			
Matrix Key SE Sediment SE Solid DS = Drum Solid DL = Drum Liquid L = Leachate WI = Wipe	My Company of The Company		EBI102co	WITCTADHZWEO	WITCTAOHSWGOI	MIHIT TOO I WE'S AME	MHGLTACR FANGO' 300	MHG TAD VE WEDS	トレース・マース・アン・マース・マース・マース・マース・マース・マース・マース・マース・マース・マース	MW-51/5-13	_	76110200		Diego (c//	Date Required Hard Copy	100 Glaty A1	Project Number	<i>**</i>	Signature	211 EDD	[60466 [77].COC	Sircess	AFTER IN P	Ċ	635 29K
Container Key 1 Plastic 2 VOA Vial 3 Sterile Plastic 4 Amber Glass 5 Widemouth Glass 6 Other 7	July 28 (No DALE !!)		11/2/00 1700	1 11/2/00 1536	11200 1510	12,00 1122	5 42/02 1120	112/00 1206	0211 00 1120	112/62 DUYS 1	0832	11/2/10 2835 11	Sampling Date Time			001-16-BBD		44011n-		E-Mall /ベーレイアン	Phone 127 - 447	JU JA	11/2/1/21/W	Contact \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Dancel To:
Preservative Key HCI, Cool to 4* H2SO4, Cool to 4* HN03, Cool to 4* NN04, Cool to 4* NN04, Cool to 4* NN04/IZA Acetate, Cool to 4* Cool to 4* None	TIME /730		<b>ド</b>	W G 3 2 1	9	۹١	છ જ ઝ	~	2 6 W	ان 3	Ŧ	10 5 2	Comp Voice SVOC LSWS Meta (SW)	17 25 26	rab (よく (3R)	1 7 3	1 1 1 M. C.	#/Cont   교   내	Refty#	1.54	- 4/80 - 5/80	12/20 VA 3	Columbia Color	30 J.C.	<b>B</b>
COMMENTS.	RECEIVED BY												1244							Out Charle	Phone	10	Company	Contact (JC7/77)	BIII To:
	COMPANY															SS	3	2	8		Te	72	Pa		Sha
Date Received 11 Courier FX Bill of Lading: See	1 3/66												Additional Analyses / Remarks		Mes No COC	Sample Labels and COC Agree		Chack ok	West No	(2,0)(2,	Temperature °C of	Received on Ice Sa	Package Sealed Sa (Yes) No		Shaded Areas For Internal Use Only
Hand Delivered See attach	DS 69	THE	, <u> </u>										es / Remarks		COC not present	C Agree	¥8 No (₹)	es. Cl. Check ok	Yes) No NA	Co.0 J 10	of Cooler	Samples Intact (Yes) No	Yes (No)	6935	se Only OI

### Severn Trent Laboratories - Chicago METALS CASE NARRATIVE

Client: AFC001-16BBD STL#, 9A11G935 SDG# U11935

WO#, 60025-001-001-0001

Date Rec'd: 11/03/00

This narrative covers the analysis of 3 Water samples for following metals

**ICP** Ag, Al, As, Ba, Be, Ca, Cd, Co, Cu, Fe, K, Mg, Mn, Na, Ni, Sb, Tl, V, Zn

**GFAA** Cr,Pb,Se,Tl

**CVAA** . Hg

Method Ref. NAS Fort Worth JRB, Texas QAPP

- 2 All analyses were performed within the required holding times
- 3 All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limit
- 4 All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits
- 5 Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.
- 6 Method blank was less than the CRDL
- Sample was not designated for Serial dilution or MS/MSD
- 8 GFAA Metals All Analytical spike recoveries were within control limits except for Chromium
- Please note: The last 6 digits of the client sample ID's were used in all CLP Forms to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP forms Please refer to the Cover Page of the CLP Forms to correlate the modified sample ID's and to the COC to correlate the Lab ID #'s to the client ID.

Metals Section Manager

### COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

6.35 297

ab Name: STL	_CHICAGO	Contract:	
a ode: STL	Case No.:	SAS No.:	_ SDG No.:U11935
OW No.: ILMO	3		
	EPA Sample No. _110200	Lab Sample ID _9A11G935-0089A11G935-0079A11G935-006_	
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e ICP inte	relement corrections	applied ?	Yes/No YES
	ground corrections ap		Yes/No YES
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omments:			
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hate:	11/21/60	Title:	the Section May
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## INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO
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13WG01	
	(

			43WG01
Lab Name: STL_CHICAG	0	Contract:	_
Lab Code: STL	Case No.:	SAS No.:	SDG No.: U11935
Matrix (soil/water):	WATER		ple ID: 9A11G935-006
Level (low/med):	LOW	Date Re	ceived: 11/03/00
% Solids:	0.0		

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	С	Q	М
	1	,			l
7429-90-5	Aluminum	291	B		P_
7440-36-0	Antimony_	6.6	U		P_
7440-38-2	Arsenic	3.7	U		P_
7440-39-3	Barium	134	B		P_
7440-41-7	Beryllium	0.60	U		P_
7440-43-9	Cadmium	0.40	U		P_
7440-70-2	Calcium	143000			P_
7440-47-3	Chromium	1.7	บิ		F_
7440-48-4	Cobalt	2.0	ប		P_
7440-50-8	Copper	1.2	ប		P_
7439-89-6	Iron	165			P_
7439-92-1	Lead	1.5	$\overline{\mathbf{U}}$		F_
7439-95-4	Magnesium	6390			P_
7439 <b>-</b> 96-5	Manganese	3.4	B		P_
7439-97-6	Mercury	0.20	U		CV
7439-95-4	Molybdenu	2.1	U		P_
7440-02-0	Nickel	1.6	U		P
7440-09-7	Potassium	976	В		P
7782-49-2	Selenium	1.9	U		F_
7440-22-4	Silver	2.5	U		P
7440-23-5	Sodium	17600	ļ		P
7440-28-0	Thallium	1.8	Ū		F
7440-31-5	Tin		1		NR
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	9.7	U		P
-	Cyanide_				NR
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Color Before: Color After:	COLORLESS COLORLESS	Clarity Before: CLEAR_ Clarity After: CLEAR_	Texture:
Comments: WITCTA043WG	01		
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### · INORGANIC ANALYSES DATA SHEET

	635	295
EPA	SAMPLE	

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	İ	42WG01
Contract.	1	1

Name: STL\_CHICAGO\_\_\_\_\_Contract: \_\_\_\_\_\_SDG\_No.: U11935

Lab Sample ID: 9A11G935-007 Matrix (soil/water): WATER Level (low/med): Date Received: 11/03/00 LOW

0.0 % Solids:

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

	<del>,</del>	<del></del>		<del>-</del>	
CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	501	-		P
7440-36-0	Antimony	6.6	ប		P-
7440-38-2	Arsenic	3.7	U		P-
7440-39-3	Barium	121	В		p-
7440-41-7	Beryllium	0.60	U		P-
7440-43-9	Cadmium	0.40	U		P-
7440-70-2	Calcium_	126000			P-
7440-47-3	Chromium	1.7	ប		F-
7440-48-4	Cobalt	2.0	IJ		P
7440-50-8	Copper	1.2	ווו		- <mark>-</mark>
7439-89-6	Iron	294			
7439-92-1	Lead	1.5	╗		F-
7439-95-4	Magnesium				P-
7439-96-5	Manganese	7.1	B		P
7439-97-6	Mercury	0.20	บ		c⊽
7439-95-4	Molybdenu	2.2	В		P
7440-02-0	Nickel	1.6	4 -		P
7440-02-0	Potassium	l ————	В	ļ	P
7782-49-2	Selenium	1.9	U		F
7440-22-4	Silver	2.5		l	P-
7440-23-5	Sodium Sodium	15400			P-
7440-28-0	Thallium	1.8	1	l	F
7440-28-0	Tin		١٠	ļ	NR
,	·	4.3	=		
7440-62-2	Vanadium_	$\begin{bmatrix}\frac{4.3}{9.7} \end{bmatrix}$			P_
7440-66-6_	Zinc	·   ———— <sup>9.</sup> /	10		
\ <u> </u>	Cyanide		.	\- <del></del>	NR
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635 300

## INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO	EPA	SAMPLE	NO
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			T1101(0111111 - 1-				
						110200	
		STL_CHICAGO_		Contract:		CDC No . U11925	
Lab	Code:	STL	Case No.:	_ SAS No.:	- <del></del>	SDG No.: U11935	

Matrix (soil/water): WATER Level (low/med): LOW \_\_0.0 % Solids:

Lab Sample ID: 9A11G935-008

Date Received: 11/03/00

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

		· ——				
Color Before: Color After:	COLORLESS COLORLESS	Clarity Clarity	Before: After:	CLEAR_ CLEAR_	Texture: Artifacts:	
Comments: EB110200						
						a3
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FORM I - IN

### Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A11G935

CLIENT ID	SAMPLE	#	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB110200 BGSMW05WG13 MW-5WG13 WGHLTA037WG013 WGHLTA037WG013 WGHLTA037WG013 WHGLTA036WG013 WHGLTA043WG01 WITCTA042WG01 E8110200	001 002 003 004 004 004 005 006 007 008	D1 D2	KEKEKEKE	80GVB301 80GVB301 80GVB301 80GVC309 80GVB301 80GVC309 80GVC309 80GVB301 80GVB301	11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00 11/02/00	11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00 11/03/00	N/A N/A N/A N/A	11/14/00 11/14/00 11/14/00 11/14/00 11/15/00 11/15/00 11/15/00 11/15/00 11/14/00 11/14/00
₹B QC:								
VBLKJN VBLKJN VBLKJP VBLKJP	MB1 MB1 BS MB1 MB1 BS		W W W	80GVB301 80GVB301 80GVC309 80GVC309	N/A N/A N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	11/14/00 11/14/00 11/15/00 11/15/00

### Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 – 16BBD STL# 9A11G935 VOA DATA:

- 1. All of the samples were analyzed within the 14-day hold time from the date of collection.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound. At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recoveries were below the QC limits for Methylene chloride and above the QC limits for 1-Chlorohexene in the LCS (Laboratory Control Sample) samples 80GVB301-MB1 BS and 80GVC309-MB1 BS Further corrective action was not performed. These compounds were not detected in the associated samples. All of the other spike recoveries were within the QC limits in the LCS samples.
- 4 Matrix Spike/Matrix Spike Duplicate analyses was specified on the sample 9A11G935-004, but was inadvertently not performed.
- The sample 9A11G935-004 had one surrogate recovery above the QC limits. The secondary dilutions performed on the sample had all surrogate recoveries within the QC limits. Further corrective action was not required. All of the other volatile samples had surrogate recoveries within the QAPP specified OC limits.
- 6. The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds) The low point in the initial calibration verifies the base reporting limits. The target compounds were quantitated using the initial calibration.
- 7 All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding continuing calibration standard.
- 8. The water samples were analyzed using a 25-mL purge volume. All of the other samples were analyzed without dilution Secondary dilutions for target compounds were performed on the sample 9A11G935-004 (1/100 and 1/1000).

Gregor L Goodwin

GC/MS Section Manager

11/27/00

Date

EPA SAMPLE NO.

635 303 TB110200

Lab Name: STS CHICAGO

Case No.:

Contract:

SAS No.: SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-001

Sample wt/vol.

25.00 (g/mL) ML

LOW

Lab File ID. JTC01

Level (low/med)

ode:

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. (ug/L or ug/Kg) ug/L COMPOUND

CAS NO.	COMPOUND	(ug/L Oi	ug/kg/ ug/L		ч
74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 74-97-5 67-66-3 71-55-6 563-58-6 56-23-5 71-43-2 107-06-2 79-01-6 78-87-5 108-88-3 10061-01-5 108-88-3 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 124-48-1 124-48-1 106-93-4	1,2-Dichloroether Trichloroether 1,2-Dichlorope Dibromomethane Bromodichlorom	omethane hene ride tyl Ether loroethene hane ropane chane ropene nloride thane ropane e methane oropropene hloropropen roethane iropane e methane oropropene hloropropen hloropropen hloropropen hloropropen hloropropen hane hene hene		555555555554255435555455555555555555555	

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

635 304

Lab Name: STS CHICAGO

Contract:

TB110200

\_ab Code·

Case No : SAS No .:

SDG No.: U11935

fatrix: (soil/water) WATER

Lab Sample ID: 9A11G935-001

Sample wt/vol 25.00 (g/mL) ML

Lab File ID: JTC01

\_evel: (low/med) LOW

Date Received, 11/03/00

5 Moisture: not dec

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

630-20-6	108-90-7Chlorobenzene	0 4	U
136777-612p.m-Xylene	630-20-61,1,1,2-Tetrachloroethane		U
95-47-6	136777-612p.m-Xvlene	_	ŭ
75-25-2Bromoform       0.5       U         98-82-8Isopropylbenzene       0.5       U         79-34-5I.1.2.2-Tetrachloroethane       0.5       U         108-86-1Bromobenzene       0.3       U         96-18-4I.2.3-Trichloropropane       0.5       U         103-65-1	95-47-6o-Xylene		Ü
98-82-8	100-42-5Styrene		U
79-34-51.1.2.2-Tetrachloroethane       0.5       U         108-86-1Bromobenzene       0.3       U         96-18-41.2.3-Trichloropropane       0.5       U         103-65-1n-Propylbenzene       0.4       U         95-49-82-Chlorotoluene       0.5       U         108-67-81.3.5-Trimethylbenzene       0.5       U         106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61.2.4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         541-73-11.3-Dichlorobenzene       0.5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71.4-Dichlorobenzene       0.5       U         104-51-8n-Butylbenzene       0.5       U         95-50-11.2-Dichlorobenzene       0.5       U         96-12-81.2-Dibromo-3-Chloropropane       0.5       U         120-82-11.2.4-Trichlorobenzene       0.5       U         87-68-3Naphthalene       0.5       U	75-25-2Bromoform		U
108-86-1Bromobenzene       0.3       U         96-18-41,2,3-Trichloropropane       0.5       U         103-65-1n-Propylbenzene       0.4       U         95-49-82-Chlorotoluene       0.4       U         108-67-81,3,5-Trimethylbenzene       0.5       U         106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61,2,4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         541-73-11,3-Dichlorobenzene       0.5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71,4-Dichlorobenzene       0.5       U         95-50-11,2-Dichlorobenzene       0.3       U         96-12-81,2-Dichlorobenzene       0.5       U         96-12-81,2-Dibromo-3-Chloropropane       0.5       U         120-82-11,2,4-Trichlorobenzene       0.5       U         87-68-3	98-82-8Isopropy1benzene		U
96-18-41,2,3-Trichloropropane       0.5       U         103-65-1n-Propylbenzene       0.4       U         95-49-82-Chlorotoluene       0.4       U         108-67-81,3,5-Trimethylbenzene       0.5       U         106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61,2,4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         99-87-6	109 96 1 Prompherson		NI.
103-65-1n-Propylbenzene       0.4       U         95-49-82-Chlorotoluene       0.4       U         108-67-81.3.5-Trimethylbenzene       0.5       U         106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61.2.4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         541-73-11.3-Dichlorobenzene       0.5       U         99-87-6	96-18-41 2 3-Trichloropropage		isi
95-49-82-Chlorotoluene       0.4       U         108-67-81.3.5-Trimethylbenzene       0.5       U         106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61.2.4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         541-73-11.3-Dichlorobenzene       0.5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71.4-Dichlorobenzene       0.3       U         104-51-8	103-65-1n-Propylbenzene	1	ŭl
106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61.2.4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         541-73-11,3-Dichlorobenzene       0.5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71,4-Dichlorobenzene       0.3       U         104-51-8n-Butylbenzene       0.5       U         95-50-11.2-Dichlorobenzene       0.3       U         96-12-81.2-Dibromo-3-Chloropropane       0.5       U         120-82-11.2.4-Trichlorobenzene       0.4       U         87-68-3	95-49-82-Chlorotoluene	i	ŭ
106-43-44-Chlorotoluene       0.5       U         98-06-6tert-Butylbenzene       0.5       U         95-63-61.2.4-Trimethylbenzene       0.5       U         135-98-8sec-Butylbenzene       0.5       U         541-73-11,3-Dichlorobenzene       0.5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71,4-Dichlorobenzene       0.3       U         104-51-8n-Butylbenzene       0.5       U         95-50-11.2-Dichlorobenzene       0.3       U         96-12-81.2-Dibromo-3-Chloropropane       0.5       U         120-82-11.2.4-Trichlorobenzene       0.4       U         87-68-3	108-67-81.3.5-Trimethylbenzene		Uĺ
95-63-61.2.4-Trimethylbenzene       0 5       U         135-98-8sec-Butylbenzene       0 5       U         541-73-11.3-Dichlorobenzene       0 5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71.4-Dichlorobenzene       0 3       U         104-51-8	106-43-44-Chlorotoluene 1		UΪ
135-98-8sec-Butylbenzene       0 5       U         541-73-11,3-Dichlorobenzene       0 5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71,4-Dichlorobenzene       0 3       U         104-51-8n-Butylbenzene       0.5       U         95-50-11,2-Dichlorobenzene       0.3       U         96-12-81,2-Dibromo-3-Chloropropane       0.5       U         120-82-11,2,4-Trichlorobenzene       0 4       U         87-68-3	98-Ub-6tert-Buty   Denzene		Ϋ́
541-73-11,3-Dichlorobenzene       0 5       U         99-87-6p-Isopropyltoluene       0.5       U         106-46-71,4-Dichlorobenzene       0 3       U         104-51-8	135-98-8sec-Buty1benzene		U I
99-87-6	541-73-11 3-Dachlorobenzene		ĭil
106-46-71.4-Dichlorobenzene       0 3       0         104-51-8n-Butylbenzene       0.5       0         95-50-11.2-Dichlorobenzene       0.3       0         96-12-81.2-Dibromo-3-Chloropropane       0.5       0         120-82-11.2.4-Trichlorobenzene       0.5       0         87-68-3	99-87-6p-Isopropyltoluene		ŭl
104-51-8n-Butylbenzene       0.5       U         95-50-11.2-Dichlorobenzene       0.3       U         96-12-81.2-Dibromo-3-Chloropropane       0.5       U         120-82-1	106-46-71.4-Dichlorobenzene		Ū
96-12-81,2-Dibromo-3-Chloropropane       0.5       U         120-82-11,2,4-Trichlorobenzene       0.4       U         87-68-3Hexachlorobutadiene       0.5       U         91-20-3Naphthalene       0.5       U	104-51-8n-Butylbenzene		U
120-82-11.2.4-Trichlorobenzene	95-50-11.2-Dichlorobenzene		빈
8/-68-3Hexachlorobutadiene 0.5 U 91-20-3Naphthalene 0.5 U	96-12-81,2-Dibromo-3-Chloropropane_		U)
91-20-3 Naphthalene 0 5 U	12U-02-11,2,4-Iricniorobenzene	1	U   11
	91-20-3Nanhthalane		i)
0/*D1-D1./.3-IN1CN1ONODENZENE	87-61-61.2.3-TrichTorobenzene	0 5	ŭl

# VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

TB110200

ETH STUNDE NO.

635 305

Lab Name: STS CHICAGO

Contract:

Code ·

SAS No.: Case No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9AllG935-001

Sample wt/vol

25 00 (g/mL) ML

Lab File ID: JTC01

Level. (low/med) LOW Date Received: 11/03/00

% Moisture not dec.

Date Analyzed: 11/14/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume. (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST CONC.	Q =====
1				
3		_		
5				
8				
9				
2				
4				
6				
8				
202122				
23.				_
24				_
26.				-\
27 28 29 30				_
<u></u>	<u> </u>			-

FORM I VOA-TIC

1/87 Rev.

### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

635 306

.ab Name: STS CHICAGO

Contract:

BGSMW05WG13

EPA SAMPLE NO.

\_ab Code

Case No.: SAS No.:

SDG No.: U11935

latrix: (soil/water) WATER

Lab Sample ID: 9A11G935-002

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID. JTC02

evel: (low/med)

LOW

Date Received: 11/03/00

6 Moisture: not dec. \_\_\_

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor 1 0

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

FORM I VOA

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635 307 BGSMW05WG13

ab Name: STS CHICAGO

Contract:

ab ^~de.

Case No.:

SAS No.:

SDG No.: U11935

R: (soil/water) WATER

Lab Sample ID: 9A11G935-002

ample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC02

evel: (low/med)

LOW

Date Received: 11/03/00

Moisture: not dec.

Date Analyzed: 11/14/00

olumn (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7	0.556545555355455555555555555555555555555

VOLATILE ORGANICS ANALYSIS DATA SHEET 308 TENTATIVELY IDENTIFIED COMPOUNDS 635

Lab Name: STS CHICAGO

Contract:

BGSMW05WG13

CHA SAMELL NU.

Lab Code:

Case No.

SAS No ·

SDG No.: U11935

Matrix (soil/water) WATER

Lab Sample ID: 9A11G935-002

Sample wt/vo?

25.00 (g/mL) ML

Lab File ID: JTC02

Level: (low/med)

LOW

Date Received: 11/03/00

% Moisture not dec

Date Analyzed: 11/14/00

GC Column, CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume. \_\_\_\_(uL)

Number TICs found. 2

CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L

1 110-54-3 HEXANE UNKNOWN CYCLOALKANE  1 110-54-3 HEXANE UNKNOWN CYCLOALKANE  1 15.62  2 J  3	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
21. 22. 23 24 25 26	1 110-54-3 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	HEXANE	_   ======		=====

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EYA SAYYEL NO.

MW-5WG13

635 309

Lab Name: STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U11935

Matmix: (soil/water) WATER

Lab Sample ID: 9A11G935-003

Sample wt/vol:

Lat\_Code:

25 00 (g/mL) ML

Lab File ID: JTC03

Level: (low/med) LOW

% Moisture, not dec

Date Analyzed: 11/14/00

Date Received: 11/03/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

0

CAS NO.	COMPOUND	(ug/L of	ug/kg/ ug/L		Ų
74-87-3 75-01-4 75-01-4 75-00-3 75-69-4 75-35-4 75-34-3 156-59-2 156-59-2 156-59-2 74-97-5 71-55-6 71-55-6 71-43-2 107-06-2 79-01-6 79-01-6 78-87-5 74-95-3 108-88-3 10061-01-5 108-88-3 10061-02-6 124-28-9 124-48-1 1124-48-1 1124-48-1	-Vinyl chloride -Bromomethane -Chloroethane -Trichlorofluorome -1,1-Dichloroether -Methylene chloric -Methylene chloric -Methylene chloric -Methylene chloroetha -Methylene chloroetha -Vinyl Acetate -Cis-1,2-Dichloroprop -Bromochlorometha -Chloroform -1,1,1-Trichloroe -1,1-Dichloroprop -Carbon tetrachlo -Benzene -1,2-Dichloroetha -Trichloroethene -1,2-Dichloroprop -Dibromomethane -cis-1,3-Dichloromet -cis-1,3-Dichloroprop -Toluene -1,1,2-Trichloroe -1,3-Dichloroprop -Tetrachloroethe -Dibromochloromet -1,2-Dibromoetha	ethaneethaneethaneethaneeneeneeneeneethaneeneethane_eneeneethane_eneethane_eneethane_eneethane_eneethane_eneeneethane_eneethane_eneethane_eneethane_eneethane_eneeneethane_eneethane_eneethane_eneethane_eneethane_eneeneethane_eneethane_eneethane_eneethane_eneethane_eneethane_eneethane_eneethane_eneethane_eneethane_eneeneethane_eneethane_eneeneethane_eneeneeneeneeneeneene	ug/kg/ ug/L	555555555454255543555545555555555555555	
544-10-5	1-Chlorohexane_			0 5	U

FORM I VOA

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# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

635 310

Lab Name: STS CHICAGO

Contract:

MW-5WG13

Lab Code.

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9Al1G935-003

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC03

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec

Date Analyzed. 11/14/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ua/L or ua/Ka) ua/L

0

сдэ <b>н</b> о.	COMPOUND (dg/L of dg/kg/ dg/L	-	Ų
630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 108-86-1 108-86-1 96-18-4 108-67-8 108-67-8 95-63-6 95-63-6 135-98-8 104-51-8 104-51-8 95-50-1 96-12-8 120-82-1 87-68-3	Chlorobenzene1.1.1.2-TetrachloroethaneEthylbenzenep.m-Xyleneo-XyleneStyreneBromoformIsopropylbenzene1.2.2-Tetrachloroethanen-Propylbenzene1.2.3-Trichloropropane1.3.5-Trimethylbenzene1.2.4-Trimethylbenzene1.2.4-Trimethylbenzene1.3-Dichlorobenzene1.4-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene1.2-Dichlorobenzene	455554555354455555555535354555	U U U U

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

MW-5WG13

635 311

Lat inde:

Lab Name: STS CHICAGO

Contract:

SAS No.:

SDG No.: U11935

Matter: (soil/water) WATER

Lab Sample ID: 9A11G935-003

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC03

\_evel. (low/med)

LOW

Case No.:

Date Received: 11/03/00

% Moisture, not dec.

Date Analyzed: 11/14/00

3C Column. CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume.\_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1 110-54-3 2 3. 4.	HEXANE UNKNOWN CYCLOALKANE	14 63 15.64		NJ J
9. 0. 1				
3 4 5. 6 7				
9				
24 25 26. 27.				
28				_

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### EPA SAMPLE NO.

### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

635 312

Lab Name: STS CHICAGO

Contract:

WGHLTA037WG013

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-004

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JTC04

Level: (low/med)

LOW

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 5.0

CONCENTRATION UNITS:

CAS NO. COMPOUND

(ug/L or ug/Kg) ug/L

Q

75-71-8
544-10-5

# VOLATILE ORGANICS ANALYSIS DATA SHEET

LPA SAMPLE NO.

WGHLTA037WG013

635 313

Lab Name. STS CHICAGO

Contract:

Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-004

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JTC04

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column (pack/cap) CAP

Dilution Factor: 5.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Λ	
w	
ч	

108-90-7	2 780 1500 940 2 170 2 340 2 570 2 1100 2 2 2 40 2 2 2 960 2	
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### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

635 314

Lab Name: STS CHICAGO

Contract:

WGHLTA037WG013

EPA SAMPLE NO.

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

JTC04

Matrix: (soil/water) WATER

LOW

Lab Sample ID: 9A11G935-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID:

Date Received: 11/03/00

Level: (low/med) % Moisture not dec.

Date Analyzed. 11/14/00

GC Column · CAP

ID: 0.53 (mm)

Dilution Factor 5.0

Soil Extract Volume.\_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L ·

Number TICs found 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
CAS NUMBER  1 2 3. 4 5 6. 7. 8 9 10. 11 12 13. 14 15. 16. 17 18 19 20 21. 22. 23 24. 25.	COMPOUND NAME  DIMETHYLBENZENE ISOMER ETHYLMETHYLBENZENE ISOMER TRIMETHYLBENZENE ISOMER SUBST. BENZENE	RT 23.86 26.64 27 33 28.70 29.18	1500 1300 910 570 1400	 J J
26				

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# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WGHETA03 7WG013DL

635 315

Lab Name: STS CHICAGO

Contract:

L\_Code.

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-004

Sample wt/vol:

25.00 (g/mL) ML

Level (low/med) LOW

Lab File ID: JTC15

Date Received: 11/03/00

% Moisture, not dec.

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor: 100.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

EPA SAMPLE NO.

WGHLTA03

635 316

Lab Name: STS CHICAGO

Contract:

7WG013DL

Lab Code

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

25.00 (g/mL) ML

Lab Sample ID: 9A11G935-004

Sample wt/vol:

Lab File ID: JTC15

Level: (low/med)

LOW

Date Received: 11/03/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed 11/15/00

Column: (pack/cap) CAP

Dilution Factor. 100.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L Q

630-20-6	108-90-7Chlorobenzene	40	
100-41-4Ethylbenzene	630-20-61 1 1 2 Totaschloroothono		11
136777-612p.m-Xylene	100-41-4 Ethylbonzono		2
95-47-6	136777_612 p.m. Vulono		~ 1
100-42-5Styrene       40         75-25-2Bromoform       50         98-82-8Isopropylbenzene       50         79-34-5	95-47 6 9 Vylone	1	
75-25-2	100-42-5		
98-82-8	75-25-2 Promoform		11
79-34-51.1.2.2-Tetrachloroethane       50         108-86-1Bromobenzene       30         96-18-41.2.3-Trichloropropane       50         103-65-1n-Propylbenzene       270         95-49-82-Chlorotoluene       40         108-67-81.3.5-Trimethylbenzene       50         106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-6tert-Butylbenzene       50         95-63-6	98-82-8		111
108-86-1Bromobenzene       30         96-18-41.2,3-Trichloropropane       50         103-65-11.2,3-Trichloropropane       270         95-49-82-Chlorotoluene       40         108-67-81.3,5-Trimethylbenzene       50         106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-61.2,4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-11.3-Dichlorobenzene       50         99-87-61.4-Dichlorobenzene       50         106-46-71.4-Dichlorobenzene       30         104-51-8	79-34-6		ii.
96-18-41.2.3-Trichloropropane       50         103-65-1n-Propylbenzene       270         95-49-82-Chlorotoluene       40         108-67-81.3.5-Trimethylbenzene       550         106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-61.2.4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-11.3-Dichlorobenzene       50         99-87-6	108-86-1		ii i
103-65-1n-Propylbenzene       270         95-49-82-Chlorotoluene       40         108-67-81.3.5-Trimethylbenzene       550         106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-61.2.4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-11.3-Dichlorobenzene       50         99-87-6	96-18-41 2 3 Trichloropropage		ii i
95-49-82-Chlorotoluene       40         108-67-81.3.5-Trimethylbenzene       550         106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-61.2.4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-1	103-65-1		N N
108-67-81.3.5-Trimethylbenzene       550         106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-61.2.4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-11.3-Dichlorobenzene       50         99-87-6p-Isopropyltoluene       50         106-46-71.4-Dichlorobenzene       30         104-51-8	95-49-82-Chlorotoluene		ii l
106-43-44-Chlorotoluene       50         98-06-6tert-Butylbenzene       50         95-63-61,2,4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-11,3-Dichlorobenzene       50         99-87-6p-Isopropyltoluene       50         106-46-7	108-67-81 3 5-Trumothylbonzono		Ď
98-06-6tert-Butylbenzene       50         95-63-61.2.4-Trimethylbenzene       2000         135-98-8sec-Butylbenzene       50         541-73-11.3-Dichlorobenzene       50         99-87-6p-Isopropyltoluene       50         106-46-71.4-Dichlorobenzene       30         104-51-8	106-43-4		ŭl
95-63-61,2,4-Trimethylbenzene       2000       135-98-81,2,4-Trimethylbenzene       50       105-98-8	98-06-6tert-Butylbenzene		ŭ
135-98-8sec-Butylbenzene       50         541-73-11.3-Dichlorobenzene       50         99-87-6	95-63-6		Ď
541-73-11,3-Dichlorobenzene       50         99-87-6p-Isopropyltoluene       50         106-46-7	135-98-8sec-But v1henzene		ŭl
99-87-6	541-73-11 3-Dichlorobenzene		ŭΙ
106-46-71.4-Dichlorobenzene       30         104-51-8n-Butylbenzene       50         95-50-11.2-Dichlorobenzene       30         96-12-81.2-Dibromo-3-Chloropropane       50         120-82-11.2.4-Trichlorobenzene       40         87-68-3Hexachlorobutadiene       50         91-20-3Naphthalene       1100	99-87-6n-Isonronyltoluene		ŭl
104-51-8n-Butylbenzene       50         95-50-11.2-Dichlorobenzene       30         96-12-81.2-Dibromo-3-Chloropropane       50         120-82-11.2.4-Trichlorobenzene       40         87-68-3Hexachlorobutadiene       50         91-20-3Naphthalene       1100	106-46-71 4-Dichlorobenzene		ŭl
95-50-11.2-Dichlorobenzene       30         96-12-81.2-Dibromo-3-Chloropropane       50         120-82-11.2.4-Trichlorobenzene       40         87-68-3Hexachlorobutadiene       50         91-20-3Naphthalene       1100	104-51-8n-Butv1henzene		ŭl
96-12-81,2-Dibromo-3-Chloropropane       50         120-82-11,2,4-Trichlorobenzene       40         87-68-3Hexachlorobutadiene       50         91-20-3Naphthalene       1100	95-50-11 2-Dichlorobenzene		ŭ
120-82-11.2.4-Trichlorobenzene    40    87-68-3Hexachlorobutadiene   50    91-20-3Naphthalene   1100	96-12-81 2-Dibromo-3-Chloropropage		Ŭ
87-68-3Hexachlorobutadiene 50 91-20-3Naphthalene 1100	120-82-11 2 A-Trichlorobenzene		Ŭ
91-20-3 1100 1100	87-68-3Hexachlorobutadiene		Ü
87-61-6	91-20-3Nanht hallene		اُق
17270 11 1011101 0001120110	87-61-61.2.3-TrichTorobenzene	l .	Ŭ
	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

## 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 317

Lab	Name:	STS	CHICAGO
Luv	1100	9.0	011101100

Contract:

WGHLTA03 • 7WG013DL

Code:
-------

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

LOW

Lab Sample ID: 9A11G935-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC15

Level: (low/med)

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/15/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 100.0

Soil Extract Volume: \_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found, 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1.				
2		_		
4. ———	<del></del>			
5.				·
9				
0				- \
3				
4			\	-\
5.				
7				-
8				_
10				_
2			<u> </u>	_
23			-	_
26.				_
o <sub>7</sub>			_	_
29 30				
30	<del></del>		-\- <del></del>	_

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### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

635 318

Lab Name: STS CHICAGO

Contract:

WGHLTA03 7WG013DL

EPA SAMPLE NO.

Lab Code:

Case No.: SAS No..

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-004

Sample wt/vol.

25.00 (g/mL) ML

Lab File ID: JTC11

Level: (low/med)

LOW

Date Received: 11/03/00

% Moisture not dec.

Date Analyzed. 11/14/00

Column. (pack/cap) CAP

Dilution Factor: 1000.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND	(ug/L or ug/kg	y) ug/L	Ų
74-87-3 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 156-59-2 156-59-2 171-55-6 71-55-6 71-55-6 71-43-2 107-06-2 71-43-2 107-06-2 107-06-2 108-88-3 10061-01-5- 108-88-3 10061-01-5- 108-88-3 1124-48-1 124-48-1 116-93-4	DichlorodifluoromChloromethaneVinyl chlorideBromomethaneChloroethaneTrichlorofluoromeI,1-DichloroetherMethylene chloridI,1-DichloroethanVinyl AcetateVinyl AcetateCis-1,2-DichloromethanChloroformI,1-TrichloroeI,1-DichloropropBromochloromethaneCarbon tetrachloBenzene1,2-DichloropropDibromomethaneDibromomethaneTrichloroethaneTolueneTolueneTolueneI,2-TrichloroethaneI,2-Trichloroethane	ethane ne de l Ether roethene ne ethene ane ne thane ene ride ne chane propene ethane bane ne thane chane	500 500 500 500 500 500 500 500 500 400 500 5	

1 1

EPA SAMPLE NO.

WGHLTA03 7WG013DL 635 319

Lab Name: STS CHICAGO

Contract:

Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC11

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column (pack/cap) CAP

Dilution Factor: 1000.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

108-90-7	400 500 500 9100 500 500 500 500 500 500 500 500 500	
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VOLATILE ORGANICS ANALYSIS DATA SHEET

320 TENTATIVELY IDENTIFIED COMPOUNDS 635

Lab Name: STS CHICAGO

Contract.

WGHLTA03 7WG013DL

EPA SAMPLE NO.

	O = -1 =
1 25	1000
1 01	Code.

Case No.:

SAS No..

SDG No.: U11935

Matrix. (soil/water) WATER

25 00 (g/mL) ML

Lab Sample ID: 9A11G935-004

Sample wt/vol.

Lab File ID: JTC11

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture, not dec

Date Analyzed 11/14/00

GC Column. CAP

ID: 0.53 (mm)

Dilution Factor, 1000.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found. 0

CAS NUMBER	COMPOUND NAME	RT	EST CONC.	Q
1				
3				
5.				
8				
10				
12 13.				
15 16.				
17. 18.				
19				
22				-
24.				
26 27. 28 29				
29				\ <u></u>
	<u> </u>	_		

ETH SHITLE NO.

635 321 WHGLTA036WG013

Lab Name: STS CHICAGO

Contract:

SAS No.:

Li\_\_Code: Case No.:

SDG No.: U11935

Maerix: (soil/water) WATER

Lab Sample ID: 9A11G935-005

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID. JTC14

Level:

(low/med) LOW Date Received: 11/03/00

% Moisture: not dec

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO COMPOLINID

CAS NU.	COMPOUND	(ug/L or ug/Kg) u	ıg/L	Q
74-87-3 75-01-4 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 156-59-2 156-59-2 71-55-6 71-55-6 71-55-6 71-43-2 107-06-2 79-01-6 78-87-5 74-95-3 74-95-3 10061-01-5- 108-88-3 10061-02-6- 79-00-5 142-28-9 124-48-1 106-93-4	DichlorodifluoChloromethaneVinyl chlorideBromomethaneChloroethaneTrichlorofluor1,1-DichloroetMethylene chloMethylene chloVinyl AcetateVinyl AcetateVinyl AcetateCarbon tetrachCarbon tetrachCarbon tetrachBromodichloropr	comethane	5.5.5.5.5.5.5.5.4.2.5.5.4.3.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	

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### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

635 322

Lab Name. STS CHICAGO

Contract.

WHGLTA036WG013

EPA SAMPLE NO.

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9Al1G935-005

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID JTC14

Level (low/med)

LOW

COMPOUND

Date Received: 11/03/00

% Moisture: not dec.

CAS NO.

Date Analyzed: 11/15/00

Column (pack/cap) CAP

Dilution Factor. 1.0

CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

# TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 323

Lab Name: STS CHICAGO

Contract:

WHGLTA036WG013

L'acode:

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-005

Sample wt/vol:  $25\ 00\ (g/mL)\ ML$ 

Lab File ID: JTC14

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture not dec \_\_\_\_\_

Date Analyzed: 11/15/00

GC Column: CAP ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume.\_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found, 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1 2 3. 4. 5.	DIMETHYLBUTANE ISOMER TETRAMETHYLHEPTANE ISOMER TRIMETHYLPENTANE ISOMER SUBST. BENZENE SUBST. BENZENE	11.42 14.82 16.93 26.34 27.70	38 44 37 99 31	J J J
8. 9. 0.				
1 2 3				
4 5 6				
8 9. 0.				
21 22 23				
25 26. 27.				
28 29 30				_

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1/87 Rev.

# 1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

635 324

Lab Name: STS CHICAGO

Contract:

WITCTA043WG01

EPA SAMPLE NO.

Lab Code.

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9Al1G935-006

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JTC12

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/15/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO

COMPOLIND

(ua/L or ua/Ka) ua/L

EPA SAMPLE NO.

635 325

Lab Name: STS CHICAGO

Contract:

WITCTA043WG01

Code.

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-006

Sample wt/vol· 25.00 (g/mL) ML

Lab File ID: JTC12

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture not dec.

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

108-90-7	0.4 0.5 13 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5
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#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

635 326 Lab Name: STS CHICAGO

Contract:

WITCTA043WG01

EPA SAMPLE NO.

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-006

Sample wt/vol. 25.00 (g/mL) ML

Lab File ID: JTC12

Level. (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/15/00

GC Column. CAP ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_\_(uL)

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
CAS NUMBER  1. 110-54-3 2 3 4. 5 6. 7 8. 9 10 11 12. 13. 14. 15 16. 17 18 19. 20. 21. 22. 23 24. 25. 26. 27	COMPOUND NAME HEXANE SUBST BENZENE	RT 12.31 23.89	=======================================	NJ J
27 28 29 30.				

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WITCTA042WG01

Lab Name STS CHICAGO

Contract:

Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix. (soil/water) WATER

Lab Sample ID: 9A11G935-007

Sample wt/vol:

25 00 (g/mL) ML

Lab File ID: JTC09

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L 0

	\1.5\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		<u> </u>
74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 156-59-2 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-43-2 107-06-2 79-01-6 79-01-6 79-01-6 108-88-3 10061-01-5 108-88-3 10061-02-6 1124-48-1 1124-48-1 1106-93-4	1.1.1-Trichloroethane1.1.1-DichloropropeneCarbon tetrachlorideBenzene1.2-Dichloroethane1.2-DichloropropaneDibromomethaneBromodichloromethanecis-1.3-Dichloropropene	5555555555425543555545745555555555555555	U

#### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

635 .328

Lab Name: STS CHICAGO

Contract:

WITCTA042WG01

EPA SAMPLE NO.

Lab Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix (soil/water) WATER

Lab Sample ID: 9A11G935-007

Sample wt/vol.

25.00 (g/mL) ML

Lab File ID: JTC09

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS: (ua/L or ua/Ka) ua/L CAS NO COMPOLIND

CAS NU.	CUMPOUND (ug/L or ug/kg)	ug/L	Ų
630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 108-86-1 103-65-1 95-49-8 106-43-4 95-63-6 135-98-8 135-98-8 106-46-7 104-51-8 104-51-8 120-82-1 87-68-3 91-20-3	Chlorobenzene1.1.1.2-TetrachloroethaneEthylbenzene	4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	U U U U U

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 329

Lab Name: STS CHICAGO

Contract:

WITCTA042WG01

Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-007

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC09

Level: (low/med)

LOW

Date Received: 11/03/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/14/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

Number TICs found 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
2		·		
4				
-				
8		-		
9.				
11				
13.			]	
14.		-		
16.				
18.				
19		-[		<u> </u>
21		_		
23		-		<u> </u>
25.		-		
26. 27.				
28				
30		_	-	·

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Lab Name: STS CHICAGO

Contract:

EB110200

Lab Code.

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G935-008

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC10

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L CAS NO. COMPOUND

Q

FORM I VOA

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EB110200

Lab Name: STS CHICAGO

Code:

Contract:

Case No.: SAS No.:

SDG No.: U11935

Matrix (soil/water) WATER

Lab Sample ID: 9A11G935-008

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JTC10

Level: (low/med) LOW

Date Received: 11/03/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/14/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7	45555545555555555555555555555555555555	

# 332 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB110200

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

LOW

Lab Sample ID: 9A11G935-008

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JTC10

Level: (low/med)

% Moisture: not dec. \_\_

Date Received: 11/03/00

Date Analyzed: 11/14/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:\_\_\_\_ (uL)

Soil Aliquot Volume: (uL)

)

Number TICs found: 3

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1 2 110-54-3 3. 96-37-7	METHYLPENTANE ISOMER HEXANE CYCLOPENTANE, METHYL-	14.15 14.62 15.63	2 37 8	J
5 6. 7. 8. 9.				
11 12 13 14. 15.				
16. 17. 18. 19.				
21. 22. 23. 24. 25.				
26. 27. 28. 29.				
		-		

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EPA SAMPLE NO.

635 333

**VBLKJN** 

Lab Name: STS CHICAGO

Contract:

Code: Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB301-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: ZA1114

Level

(low/med) LOW

Date Received: 11/14/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed. 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L 0

75-71-8-----Dichlorodifluoromethane 0.5 74-87-3-----Chloromethane 0 5 U 75-01-4-----Vinyl chloride 0.5 U 74-83-9-----Bromomethane U 0.5 75-00-3-----Chloroethane 0.5 U 75-69-4-----Trichlorofluoromethane\_\_\_ 0.5 U 75-35-4-----1,1-Dichloroethene U 0.5 75-09-2-----Methylene chloride 0.5 U 1634-04-4-----Methyl-tert-Butyl Ether 0.5 U 156-60-5-----trans-1,2-Dichloroethene 0.5 U 75-34-3-----1,1-Dichloroethane 0.4 U 108-05-4------Vinyl Acetate U 156-59-2----cis-1,2-Dichloroethene\_ 594-20-7-----2,2-Dichloropropane\_\_\_\_ 0.5 0.5 U U 74-97-5-----Bromochloromethane \_\_\_\_\_ 0.4 U 0.3 U 67-66-3-----Chloroform 71-55-6----1.1.1-TrichToroethane 0.5 U 563-58-6-----1,1-Dichloropropene 0.5 U 56-23-5-----Carbon tetrachloride 0.5 U 71-43-2-----Benzene 0.4 U 107-06-2-----1,2-Dichloroethane 0.5 U 79-01-6----Trichloroethene U 0.5 78-87-5-----1,2-Dichloropropane\_ U 0.4 74-95-3-----Dibromomethane 0.5 U 75-27-4-----Bromodichloromethane 0.5 U 10061-01-5----cis-1,3-Dichloropropene\_ 0.5 U 108-88-3-----Toluene U 10061-02-6----trans-1,3-Dichloropropene\_ 0.5 U 79-00-5-----1,1,2-Trichloroethane 0.5 U 142-28-9----1,3-Dichloropropane\_ 0.4 U 0.5 0.5 127-18-4-----Tetrachloroethene U 124-48-1----Dibromochloromethane U 106-93-4-----1,2-Dibromoethane\_ 544-10-5----1-Chlorohexane\_\_\_\_ 0.5 U 0.5

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### 635 334 VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**VBLKJN** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB301-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: ZA1114

Level: (low/med)

LOW

Date Received: 11/14/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

31.5 110.	(agree of agring) agree		•
630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 79-34-5 108-86-1 96-18-4 95-63-6 135-98-8 106-46-7 104-51-8 95-50-1 96-12-8 120-82-1 87-68-3	Chlorobenzene1.1.1.2-TetrachloroethaneEthylbenzene	45555455535445555555535354555	טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט

## 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Case No.: SAS No.:

EPA SAMPLE NO.

635 335

Name:	STS CHICAGO	Contract:

**VBLKJN** 

SDG No.: U11935

Matrix (soil/water) WATER

Lab Sample ID: 80GVB301-MB1

Sample wt/vol.

25.00 (g/mL) ML

Lab File ID: ZA1114

Level: (low/med) LOW

L. Code:

Date Received, 11/14/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/14/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_ (uL)

Number TICs found: 0

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	======================================	=   ======		=====
2.	<del></del>	_		
3				
·	<u> </u>	<u> </u>		
		-		
7.				
8		_		
.0		[	·	
		_		
2				
13.				
15.	<del></del>	_		<u> </u>
.6			]	
17		_[		
<u>                                      </u>	<del></del>		<u>-</u>	
20		_		ļ
21.				
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			1	1

**VBLKJP** 

Lab Name: STS CHICAGO

Contract:

SAS No.: SDG No.: U11935 Case No.:

Matrix: (soil/water) WATER

Lab Sample ID: 80GVC309-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: MA1115

Lab Code:

Level: (low/med) LOW Date Received 11/15/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor. 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

		ng, ug, L	٩
75-71-8	Dichlorodifluoromethane	0.5	U
74-87 <b>-</b> 3- <i>-</i>	Chloromethane	0.5	ŭl
75-01-4	Vinyl chloride	0.5	ŭl
74-83-9 <b></b>	Bromomethane	0.5	ŭl
75-00-3	Chloroethane	0.5	ŭl
75-69-4	Trichlorofluoromethane	0.5	ŭ
75-35-4	1.1-Dichloroethene	0.5	ŪÌ
75-09-2	Methylene chloride	0.5	ŪΙ
1634-04-4	Methyl-tert-Butyl Ether	0.5	ŪΙ
156-60-5 <b></b>	trans-1.2-Dichloroethene	0.5	ŪΙ
75-34-3	1.1-Dichloroethane	0.4	ŪΙ
108-05-4	Vinyl Acetate	2	U
156-59-2	cis-1.2-Dichloroethene	0.5	U
594-20-7 <b>-</b>	2.2-Dichloropropane	0 5	U
/4-97-5	Bromochloromethane	0.4	U
67 - 66 - 3	Chloroform	0.3	U
71-55-6	1.1.1-Trichloroethane	0.5	U
<u> 563-58-6</u>	1,1-Dichloropropene	0.5	U]
56-23-5	Carbon tetrachloride	0.5	U
71-43-2	Benzene	0 4	U
107-06-2	1,2-Dichloroethane	0.5	U)
/9-01-6	Trichloroethene	0 5	Uļ
<u> </u>	1,2-Dichloropropane	0.4	U
/4-95-3	Dibromomethane	0.5	U
/5-2/-4	Bromodichloromethane	0.5	U
10061-01-5-	cis-1,3-Dichloropropene	0.5	U
108-88-3	Toluene	0 5	U
10061-02-6	trans-1,3-Dichloropropene	0.5	U
/9-00-5	1,1,2-Trichloroethane	0.5	U
142-28-9	1.3-Dichloropropane	0.4	U U
12/-18-4   12/ 10 1	Tetrachloroethene	0.5	U
124-48-1 106 02 4	Dibromochloromethane	0.5	U
100-93-4   544-10-5	1.2-Dibromoethane	0.5	l !!
044-10-5	1-Chlorohexane	0.5	U
		<u> </u>	

Lab Name: STS CHICAGO

Contract:

**VBLKJP** 

Code:

Case No.:

SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Sample wt/vol:

LOW

MA1115

CAS NO.

25.00 (g/mL) ML

COMPOUND

Lab File ID:

Level: (low/med)

Date Received: 11/15/00

Lab Sample ID: 80GVC309-MB1

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L

Q

		l
108-90-7Chlorobenzene	0.4	U∤
630-20-61,1,1,2-Tetrachloroethane	0.5	U
100-41-4Ethylbenzene	0.5	ゖ
136777-612p.m-Xylene	0.5	U
95-47-6o-Xylene	0.5	υl
100-42-5Styrene	0.4	UÌ
75-25-2Bromoform	0.5	Ū
98-82-8Isopropylbenzene	0.5	ŪΙ
79-34-51,1,2,2-Tetrachloroethane	0.5	Ŭ
108-86-1Bromobenzene	0.3	ŭl
96-18-41,2,3-Trichloropropane	0.5	ŭί
103-65-1n-Propylbenzene	0.4	ŭl
95-49-82-Chlorotoluene	0.4	ŭl
108-67-81,3,5-Trimethylbenzene	0.5	ŭ
106-43-44-Chlorotoluene	0.5	ŭl
98-06-6tert-Butylbenzene	0 5	ŭ
95-63-61,2,4-Trimethylbenzene	0.5	ŭ
135-98-8sec-Butylbenzene	0.5	ŭ
541-73-11,3-Dichlorobenzene	0.5	ŭÌ
99-87-6p-Isopropyltoluene_	0.5	Ŭ
106-46-71.4-Dichlorobenzene	0.3	ŭ
104-51-8n-Butylbenzene	0.5	ŭ
95-50-11,2-Dichlorobenzene	0.3	ŭļ
96-12-81,2-Dibromo-3-Chloropropane	0.5	Ü
120-82-11,2,4-Trichlorobenzene	0.4	Ü
87-68-3Hexachlorobutadiene	0.5	บ
91-20-3Naphthalene	0.5	ับ ไป
87-61-61,2,3-Trichlorobenzene	0.5	U
07 Of 01,2,3-11 ICITIOI ODERZERE	0.5	U
<u></u>	l	

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h	.1		.,	.)	$\circ$

# 38 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VBLKJP	

EPA SAMPLE NO.

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

Matrix. (soil/water) WATER

Lab Sample ID: 80GVC309-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: MA1115

Level: (low/med) LOW Date Received: 11/15/00

% Moisture: not dec.

Date Analyzed: 11/15/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
3 4.				
5				
7			·	 
10.				
12				
14				
16. 17				
18				
21. 22. 23.				
23.				
24. 25. 26. 27.				
28				-
30.				-

# VOLATILE ORGANICS ANALYSIS DATA SHEET.

EPA SAMPLE NO.

635 339

**VBLKJNBS** 

Name: STS CHICAGO

Contract:

Lus Code:

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 80GVB301-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: ZD1114

Level: (low/med) LOW

Date Received. 11/14/00

% Moisture: not dec.

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO

COMPOUND

(ug/L or ug/Kg) ug/L

0

**VBLKJNBS** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

Lab Sample ID: 80GVB301-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID:

ZD1114

Level: (low/med) LOW

Matrix: (soil/water) WATER

Date Received: 11/14/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/14/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

ı <del></del>	<del>-</del> -	
630-20-6 100-41-4 136777-612 95-47-6 100-42-5 75-25-2 98-82-8	Styrene Bromoform Isopropylbenzene 1,1,2,2-Tetrachloroethane	10 9 10 20 10 11 11 10 9
108-86-1 96-18-4 103-65-1 95-49-8 108-67-8 106-43-4 98-06-6 95-63-6	Bromobenzene1,2,3-Trıchloropropanen-Propylbenzene2-Chlorotoluene4-Chlorotoluenetert-Butylbenzene1,2,4-Trımethylbenzenesec-Butylbenzene	10 8 10 10 10 9 10 9
541-73-1 99-87-6 106-46-7 104-51-8 95-50-1 96-12-8 120-82-1 87-68-3 91-20-3	1,3-Dichlorobenzenep-Isopropyltoluene1,4-Dichlorobenzenen-Butylbenzene1,2-Dichlorobenzene1,2-Dibromo-3-Chloropropane1,2,4-TrichlorobenzeneHexachlorobutadieneNaphthalene	10   10   10   10   7   10   10   8
8/-61-6	1.2.3-TrichTorobenzene	9

**VBLKJPBS** 

Lab Name: STS CHICAGO

Contract:

SAS No.: SDG No.: U11935

Matrix (soil/water) WATER

Lab Sample ID: 80GVC309-MB1S

Code:

Sample wt/vol: 25.00 (g/mL) ML

Case No.:

Lab File ID: MC1115

Level: (low/med) LOW

Date Received: 11/15/00

% Moisture: not dec. \_

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO COMPOLIND

FORM I VOA

1/87 Rev.

#### 635 342 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**VBLKJPBS** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11935

Matrix: (soil/water) WATER

Lab Sample ID: 80GVC309-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: MC1115

Level: (low/med)

LOW

Date Received: 11/15/00

% Moisture: not dec.

Date Analyzed: 11/15/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

108-90-7	10
95-50-11,2-Dichlorobenzene 96-12-81,2-Dibromo-3-Chloropropane	9

### Severn Trent Laboratories Chicago BNA ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A11G935

CLIENT ID	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
WITCTA043WG01 WITCTA042WG01 EB110200	006 007 008	W W	9AGB0549	11/02/00	11/03/00	11/06/00 11/06/00 11/06/00	11/07/00
LAB QC.							
SBLKZZ SBLKZZ	MB1 MB1 BS	W	9AGB0549 9AGB0549	N/A N/A	N/A N/A	11/06/00 11/06/00	11/07/00 11/07/00

Date Received 11, 3,00  Courier FX Hand Delivered  Bill of Lading. See attach  STI Chicago Chain of Custody CHI-2208 731/A 598	S. COMPANY COMPANY	RECEIVER BY	Discription of the cool to 4"  Nome  Time  Time  Preservative Key  HCI, Cool to 4"  HXSQ, Cool to 4"  None  None	INME  Preservative  Preservati	1206 1120 1120 1336 1400	33 -112 33 -112 33 -112 33 -112 11   21 11   TAD3E CICL TAD3E CICL TAD3E CICL TAD43WGC TAD45WGC TAD45WGC TAD45WGC TAD45WGC TAD45WGC TAD45W	▗▗▗ <del>▗</del> ▗ <del>▗</del> ▗ <del>▗</del> ▗ <del>▗</del>	DOA  DOA  ODA  ODA  ODA  ODA  ODA  ODA	
				<del>-                                     </del>	56.37 56.37	11/2/26	TOWERS	╼┾═╌┼	007
PH Check ok (Yes) No NA (Yes) No NA (Yes) No (NA (Yes) No (NA (Yes) No (NA (Yes) No (NA (Yes) No (Yes)		Sw voiob)	SVOCS SWF260H) HE	Matrix Post of the Comp/Grab	- 16 BBD P	Sall Sall	Project Nu Project Nu	THE REAL PROPERTY OF THE PROPE	tory tory
Package Sealed Samples Sealed Yes No Received on Ice Received on Ice Repaired No Temperature °C of Cooler Temperature °C of Cooler (7.0) (3.0) (3.0) (98) No NA	(JEZME)	Company Company Address Address Phone Phone	3 000		PER CARES	Report To:  Contact 1/1/ Company 1/1/ Address 1/3/ Address 1/3/ Phone 2/3/3 Phone 2/3/3 Fex 7/3/3	AFCEE CLE  AFCEE CLE  AFCEE CLE  AFCEE Signature	1 - 7	Committed To Your Success Chicago Laboratory 2417 Bond Street University Park, IL 80486 Phone 708-534-5200 Fax 708-534-5211 Sampler Name.

Phenol bis(2-Chlorophenol 1.3-Dichlorobenzene 1.4-Dichlorobenzene 1.2-Dichlorobenzene 2-Methylphenol 2.2'-oxybis(1-Chloropropane N-Nitroso-di-n-propylamine 4-Methylphenol Hexachloroethane Nitrobenzene Isophorone 2.4-Dimethylphenol bis(2-Chloroethoxy)methane 2.4-Dichlorobenzene 1.2,4-Trichlorobenzene 4-Chloroaniline 4-Chloroaniline 4-Chloro-3-methylphenol 2-Methylnaphthalene 4-Chloro-3-methylphenol 2-Methylnaphthalene 4-Chloro-3-methylphenol 2-Methylnaphthalene 4-Chloro-3-methylphenol	2-F Surrogate Recovery Nitro 2-Flue 2,4,6-Tri	Sample Information	3 5 RFW_Batch_Number: 9A11G935
(TP QC	Fluorophenol Phenol-d5 trobenzene-d5 luorobiphenyl ribromophenol Terphenyl-d14	RFW#: Matrix: D.F.: Units:	ust ID:
10 U U U U U U U U U U U U U U U U U U U	63 % 62 % 76 % 77 % 47 %	WATER 1	SEMI Client: AFCC
	65 % 68 % 81 % 78 % 42 %	WATER 1	STL Ch SEMIVOLATILES BY ( AFC001-16BBD
	74 83 89 94 106 87	008 WATER 1 UG/L	BY GC/MS, HSL LIST Work WG0 EB110200
	66 71 79 80 80 80 80 80	9AGB0549-MB1 WATER 1 UG/L	SBLKZZ
78 89 90 90 90 90 90 90 90 90 90 9	68 73 85 85 91 105 87 102 87	9AGB0549-MB1 WATER 1 UG/L	Report Date: 5.001.001.0
			11/27/00 10:00 Page: la

U 9 U 10 U 9 U 10 47 II 49
7 008
9A11G935 Client: AFC001-16BBD Work Orde Cust ID. WITCTA043WG0 WITCTA042WG0 EB110200 SBLKZ
EB110200  008  10 10 10 10 10 10 10 10 10 10 10 10 10

(1888 - 85) (1888 - 85)	635	347
Dibenzo(a.h)ar Benzo(g,h,i)pe N-Nitrosodiphe Benzyl alcohol Benzoic acid (1) - Cannot b		W Batc
Dibenzo(a.h)anthracene 10 U Benzo(g.h.i)perylene 10 U N-Nitrosodiphenylamine (1) 10 U Benzyl alcohol 50 U Benzoic acid 50 U (1) - Cannot be separated from Diphenylamine.		RFW Batch Number: 9A11G935
hracen ylene ylamin separ		r: 9 <u>A</u> 1
e (1)		1 <u>6935</u> Cu
rom Di	RFW#:	st ID:
Thenyla	<b></b> -	Clie
10 10 10 10 50 mine.	006	ent: Af A043WG(
U 9 U 10 U 9 U 10 U 9 U 10 U 9 U 10 U 47 U 49 U 47 U 49 . *= Outside of EPA CLP QC 1		S Client: AFC001-16BBD Cust ID: WITCTA043WG0 WITCTA042WG0
9 9 9 47 1ts1de	007	68BD TA042W
U U U U Of EPA		
10 10 10 10 49 00	0	EB110200
0 U U U U U U U U U U U U U U U U U U U	008	Work
ts.	9AGB05	k Order: SBLKZZ
10 10 10 0 0	49-MB1	6002
	9AGB0549-MB1 9AGB0549-MB1	Work Order: 60025-001-001-0 SBLKZZ SBLKZZ BS
90 89 85 78	549 - MB	01-0 Z BS
4 96 96 96 4	1	
		Page:
		10
-		9

# Severn Trent Services - Chicago GC/MS BNA Case Narrative

AFC001-16BBD STL# 9A11G935 BNA DATA:

- 1. The organic extractions and the sample analyses were performed within recommended hold times.
- 2. The Method Blank had all target compounds below the reporting limits.
- 3. The LCS (Laboratory Control Sample) sample was 9AGB0549-MB1 BS. The BNA LCS full list spike solution (100 μg/mL) was used and 1.0 mL was spiked in the LCS sample. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. The target compounds and the QC limits listed in the QAPP were used to evaluate QC acceptance in the LCS (Laboratory Control Sample) samples. The spike recoveries were within the specified QC limits for the target compounds in the LCS sample.
- 4. Matrix Spike/Matrix Spike Duplicate analyses were not performed on this sample set.
- 5. The BNA Surrogate solution (Acids at 150 μg/mL and Base-Neutrals at 100 μg/mL) was used and 0.5 mL was spiked in the samples. All of the samples had all surrogate recoveries within the QAPP specified OC limits.
- 6. All analyses were performed following USEPA SW846 Method 8270C protocol or according to the QAPP. All of the internal standard and surrogate peaks have been labeled by name. All of the samples had internal standard areas and retention times within the acceptance criteria as compared to the corresponding continuing calibration standard.
- 7. The samples were extracted as low-level waters; therefore, normal reporting limits apply.

Gan Pyrica	11/27/00
Gary Rynkar	Date
GC/MS BNA Unit Leader	



**STL Chicago** 

2417 Bond Street University Park, IL 60466

Tel 708 534 5200 Fax 708 534 5211 www.stl-nc.com

November 30, 2000

Ms. Kim Evers HydroGeoLogic, Inc. 1155 Herndon Parkway, Suite 900 Herndon, VA 20170

RE: AFC001-16BBD Analytical Report Lot 9A11G926

Dear Ms. Evers

The enclosed summary report is for the project and lot number listed above. The volatile results will be reported on form 1s instead of a spreadsheet format due to LIMS limitations. The EDD and error report will be transferred via E-mail when completed. If you have any questions, please contact me at 708-534-5200.

Sincerely,

Severn Trent Laboratories

Donna Ingersoll
Project Manager

sj

Enclosures: Summary Report

CLP Report & Data Summary-Nancy Weaver /EDS

The results presented in this report relate only to the analytical testing and conditions of sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

### Severn Trent Laboratories Chicago INORGANIC ANALYTICAL DATA PACKAGE FOR AFC001-16889 1599

LOT # :9A11G926

CLIENT ID /ANALYSIS	SAMPLE #	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
EB110100							
ARSENIC. TOTAL BARIUM, TOTAL COBALT, TOTAL LEAD, TOTAL	007 007 007 007	W W W	9AGI1203 9AGI1203	11/01/00 11/01/00	11/02/00 11/02/00	11/07/00 11/07/00 11/07/00 11/07/00	11/15/00 11/15/00
LSA1628-2WG02							
ARSENIC, TOTAL BARIUM, TOTAL COBALT, TOTAL LEAD, TOTAL	008 008 008 008	M M M	9AGI1203 9AGI1203	11/01/00 11/01/00	11/02/00 11/02/00	11/07/00 11/07/00 11/07/00 11/07/00	11/15/00 11/15/00

NY CERTIFICATION # 11006

### Severn Trent Laboratories - Chicago METALS CASE NARRATIVE

Client. AFC001-16BBD STL#: 9A11G926 SDG# U11926

WO# 60025-001-001-0001

Date Rec'd: 11/02/00

1 This narrative covers the analysis of 2 Water samples for following metals.

ICP .... Ba, Co, Pb GFAA.. As

Method Ref NAS Fort Worth JRB, Texas QAPP

- 2. All analyses were performed within the required holding times.
- All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limit. 3
- All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits
- Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.
- Method blank was less than the CRDL 6.
- No sample from this SDG was designated for Serial Dilution or MS/MSD
- GFAA (Arsenic). Analytical spike recoveries were within control limits.
- Please note The last 6 digits of the client sample ID's were used in all CLP Forms to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP forms Please refer to the Cover Page of the CLP Forms to correlate the modified sample ID's and to the COC to correlate the Lab ID #'s to the client ID

Mani S Iyer · /

Metals Section Manager

# U.S. EPA - CLP

### COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Nat	me: STL_C	CHICAGO	Contract:	<u> </u>
Lab Cod	de: STL_	Case No.:	SAS No.:	SDG No.:U11926
SOW No	.: ILM03			
		EPA Sample No. _110100 _2WG02	Lab Sample ID _9A11G926-0079A11G926-008	
<i>M</i> ere IC	'P intere	lement corrections		yog/No ypo
√ere IC If	CP backgr Tyes - w	ound corrections a ere raw data gener	applied ? cated before	Yes/No YES Yes/No YES
ap Comment		n of background co	orrections ?	Yes/No NO_
			·	<del></del>
ondition ther the contract the	ions of the than the shardcop ppy disker's design	he contract, both conditions detailery data package and tte has been authors.	is in compliance with the technically and for completed above. Release of the din the computer-readable orized by the Laboratory by the following signature  Name:  Title:	leteness, for data contained e data submitted Manager or the e.

COVER PAGE - IN

ILM02.1

EPA	SAMPLE	NO
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INORGANIC ANALYSES DATA SHEET	·
	110100
Lab Name: STL_CHICAGO Contract:	1
Lab Code: STL Case No.: SAS No.:	SDG No.: U11926
	e ID: 9A11G926-007
	ived: 11/02/00
% Solids:0.0	
Concentration Units (ug/L or mg/kg dry weight)	IIG/I

CAS No.	M  NR  NR  F  NR  NR  NR  NR  NR  NR  NR
7440-36-0 Antimony	NR F P NR NR NR NR NR NR
7440-36-0 Antimony	NR F P NR NR NR NR NR NR
7440-38-2	F P NR NR NR P NR
7440-39-3 Barium 1.0 U 7440-41-7 Beryllium 7440-43-9 Cadmium 7440-47-3 Chromium 7440-48-4 Cobalt 2.0 U	NR NR NR NR NR
7440-43-9 Cadmium	NR NR NR P NR
7440-43-9   Cadmium	NR NR P NR
7440-47-3 Chromium 2.0 U	NR P NR
7440-48-4   Cobalt	P NR
	NR
7440~50-8 Copper	
1,110 30 0 (COpper	1 1
7439-89-6   Iron	NR
7439-92-1   Lead  1.5   U	F_
7439-95-4   Magnesium	$ N\overline{R} $
7439-96-5 Manganese	NR
7439-97-6   Mercury	NR
7439-95-4   Molybdenu	NR
7440-02-0 Nickel	NR
7440-09-7   Potassium	NR
7782-49-2   Selenium	NR
7440-22-4   Silver	NR
7440-23-5   Sodium	NR
7440-28-0   Thallium	NR
7440-31-5   Tin	NR
7440-62-2   Vanadium	NR
7440-66-6 Zinc	NR
Cyanide	NR
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		COLORLESS COLORLESS	Clarity Clarity	Before: After:		Texture:Artifacts:	
ommer 1	nts: .10100						_
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	7		
INORGANIC	ANALYSES	DATA	SHEET

EPA SA	MPLE	NO.
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	INORGANIC ANA	TO DE DATA DUDO	' ,— <del>——</del> —	
			2 <b>W</b> G02	
Lab Name: STL CHICAGO	l	Contract:		.
Lab Code: STL	Case No.:	SAS No.:	SDG No.: U11926	
Matrix (soil/ $\overline{\text{wat}}$ er):	WATER		Sample ID: 9A11G926-0	80
	LOW	Date	Received: 11/02/00	
% Solids:	0.0			

Concentration Units (ug/L or mg/kg dry weight):  $UG/L_{\perp}$ 

<del></del>		<u> </u>		<u> </u>	1
CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	<del></del>	-		NR
7440-36-0	Antimony		_		NR
7440-38-2	Arsenic	31.0	B		F
7440-39-3	Barium			<del></del>	P
7440-41-7	Beryllium		-		NR
7440-43-9	Cadmium		-		NR
7440-70-2	Calcium		-	<del></del>	NR
7440-47-3	Chromium		-		NR
7440-48-4	Cobalt	2.0	บี		P
7440-50-8	Copper				NR
7439-89-6	Iron		_	<u> </u>	NR
7439-92-1	Lead	1.5	บี		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese		-		NR
7439-97-6	Mercury		_		NR
7439-95-4	Molybdenu		-	1	NR
7440-02-0	Nickel				NR
7440-09-7	Potassium		_		NR
7782-49-2	Selenium		_		NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium		_	\	NR
7440-31-5	Tin				NR
7440-62-2	Vanadium			İ	NR
7440-66-6	Zinc				NR
_	Cyanide				NR
	<del>-</del>		-		
			-		
					.
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			_   _		_

	Before: After:	COLORLESS COLORLESS		Before: After:		Texture: Artifacts:	
Commer LSA	nts: A1628-2 <b>W</b> G	02	_				
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   > 0 & 0 0 5 <		<u> </u>	ן ר	 	 											-					_	63	35	3	55	!	
WW = Wastewater W = Water S = Soif SL = Studge MS = Miscellaneous OL = Oil A = Ar	RELINGUISHED BY	KET MODISHED BY					<del>2</del> 2	046	83	004	.83	602	001	ID	┨	Project Location.	1/1/1//	3	1 '	Name ,		University Park, IL 60466 Phone. 708-534-5200			_		
Matrix Key  SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leachate W1 = Wipe O =	COMPANY	COMPANY					BALLY Y	STANTE Y	150 TAN 1 1500 (1)	1211 Pc . vv . 13	- 1 V . Amer 13	190 161 13		Sample ID	1		(1 Cyinte	( Project	15.71	Signature	+5211	1L 60466 <b>CD 0</b>	et locatory / L. Coc		THE CELLUP		
Container Key 1 Plastic 2 VOA Vial 3 Stenle Plastic 4 Amber Glass 5 Widemouth Glass 6 Other 7	, DATE 1	DATE ,				-	ſ	7. 1. 1	14 males 040	11/1/2	11/1/11/11/11	11/1/20 /2:5		Sampling Date Time		Date Required Hard Copy / /		Project Number	J. K. W.	lure	E-Mail KY 11/5	Fax //	Phone	8		Company	Contact 1
Preservative Key HCI, Cool to 4* H2SO4, Cool to 4* HNO3 Cool to 4* NaOH, Cool to 4* NaOH/Zn Acetale, Cool to 4* Cool to 4* None	TIME	TIME				,	.,				-		1 1	Com	٠, ٠-		Preserv 1 2	Volume	#/ Comt. 3 /	Refrg #	1 11/1 /3	11/2:		,			•
COMMENTS.	RECEIVED BY OU	RECEIVED BY WWW.													-						PO# Quate	Fax	Phone		Address	Company	Contact
	COMPANY	COMPANY														S		ld						20			)
Date Received 11 Courier FX H Bill of Lading Sec	DATE	Uhr oo												Additional Analyses / Remarks	Yes No COC	Sample Labels and COC Agree	2			Within Hold Time Pro		Temperature °C of Cooler	Yes No		No.	- 12	1 ab 1 of # 901(692/6
Hand Delivered	TIME	0.50		•										s / Remarks	COC not present	C Agree	Yes No (NA	Res. Cl <sub>2</sub> Check-ek	Yes No NA	Presery indicated		Cooler	No No	mples Intact	Yes (No)	mples Sealed	6926

			2, 711457 BOO	MS-MS	₹],	Lab PM	riolect Location	7,7,7	, indiffic	Project Name	Z	Fax 708-534-5211	University Park, IL 60466 Phone: 708-534-5200	2417 Bond Street	Chicago Laboratory	Committed To Your Success			
			JMC1 : 11/10 11/11	ole ID Date Time	, s	Fav	Date Required	Activities of the second	Project Number	ナー・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	Signature	E-Mail	Fax	Phone		Address	Company	Conlact	Report To:
			- -	Con Asia (Con	7	Gra	·;.	Preserv 3	Volume it	#/ Cont. I	Refrg#		7 : 1						
							-					PQ#	Fax	Phone		Address	Company	Contact	Вш То:
												Quote							
				Additional Analyses / Remarks	, ,,,,	Ves No COC not present	Sample Labels and COC Agree	Yes No NA Yes No (NA	ck ok R	Yes No Yes No NA	iold Time	4,4	Temperature, °C of Cooler		Received on Ice Samples Intact	(Yes) No Yes (No)		Lab Lot # 9A116 926	Shaded Areas For Intel de Only of

Matrix Key

Container Key

Preservative Key

WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

1 Plastic 2 VOA Vial 3 Stenie Plastic 4 Amber Glass 5 Widemouth Glass 5 Other

1 HCl, Cool to 4\*
2 H2SO4 Cool to 4\*
3 HNO3, Cool to 4\*
4 NaOH, Cool to 4\*
5 NaOHZn Acetate, Cool to 4\*

EF. 111 111 COMMENTS

m/ 125, 11 .

11

Date Received

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Courier

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Hand Delivered 6

Bill of Lading See attach

None Cool to 4° 356

RELINQUISHED BY

COMPANY

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TIME TIME

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COMPANY

Oak 2 1100

IME 0350 10450

### Severn Trent Laboratories Chicago 8260 ANALYTICAL DATA PACKAGE FOR AFC001-16BBD

LOT # :9A11G926

CLIENT ID	SAMPLE	#	MTX	PREP #	COLLECTN	DATE REC	EXT/PREP	ANALYSIS
TB110100 MW-10WG13 MW-10WG13 SAV-2WG13 SAV-2WG13 DUP05WG13 DUP05WG13 BGSMW03WG13 BGSMW03WG13 BGSMW03WG13	001 002 002 003 003 004 004 005 005	01 01 01	EEEEEEEE	80GVF372 80GVF372 80GVF372 80GVF372 80GVF372 80GVT202 80GVT202 80GVT202 80GVT202	11/01/00 11/01/00 11/01/00 11/01/00 11/01/00 11/01/00 11/01/00 11/01/00	11/02/00 11/02/00 11/02/00	N/A N/A N/A N/A N/A N/A N/A N/A	11/11/00 11/11/00 11/12/00 11/11/00 11/12/00 11/11/00 11/12/00 11/12/00 11/12/00
EB110100  LAB QC:  VBLKKN VBLKKN VBLKKJ VBLKKJ	MB1 MB1 BS MB1 MB1 BS		W W W W	80GVT202 80GVF372 80GVF372 80GVT202 80GVT202	N/A N/A N/A N/A	11/02/00 N/A N/A N/A N/A	N/A N/A N/A N/A	11/12/00 11/10/00 11/10/00 11/12/00 11/12/00

63	5	35	8																									
WW = Wastewater W = Water S = Soil SL = Siudge MS = Miscellaneous QL = Oil A = Air	RELINQUISHED BY	RELINQUISHED BY					700	086	85	001	<i>8</i> 00	ω <u>2</u>	100	Laboratory 50			Project Location		;	Sampler Name	Fax: 708-534-5211	University Park, IL 60466	Chicago Laboratory	(annuncel To Year				
Matrix Key SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leachate W1 = Wipe	/ COMPĂNY	COMPANY							150 JA W 1514 1	1,11 P1 1,111 13	11. 1200 13	Nº1611113	1 12 13	Client Sample ID	-	Hard	Date Re		,	Signature	5211	L 60466 EDD	oratory in the coc		HECEFOLD .		1969 1969 1979 1979	
Container Key 1 Plastic 2 VOA Vial 3 Stenle Plastic 4 Amber Glass 5 Widemouth Glass 6 Other	٦,	DATE				-	11 1 1 1	17.6	17 m/1/20 1411	11/1/62 1364	11/1/2 1/21	11/1/00 163 -		Sampling Date Time	Fax//	Hard Copy//	guired	- * *	1/1/10	Ce .	E-Mail /// 1 / 5	Fax	Phone				Contact !	Report To:
Preservative Key  1 HCl Cool to 4*  2 H2S04 Cool to 4*  3 HN03, Cool to 4*  4 Na0H, Cool to 4*  5 Na0H/Zn Acetate, Cool to 4*  1 None	TIME	DIME					. 72	•			-/-		t 1 1	Com	: t <sub>i</sub>	Grab	, / (,		#/ Cont.	Refrg#	( FIZ 1 /12.	1/13.		. "				
COMMENTS.	RECEIVED BY OU	RECEIVED BY WAR STATE																			PO# Quote:	Fax	Phone		Address	Company	Contact	BIII To:
	COMPANY	COMPANY										:																
Date Received 11, 2, 60 Courser FX Hand Delivered Bill of Lading See attach		1/2/00 0150		•										Additional Analyses / Remarks		Yes No COC not present	Sample Labels and COC Agree	Ves No NA Yes No (NA	1	Within Hold Time   Presery indicated	┨`_	Temperature °C of Cooler		Received on Ice Samples Intact		Package Sealed Samples Sealed	Lab Lot # 9ATG 9216 0	Shaded Areas For Inte

Sampler Name	Fax 708-534-5211	University Park, IL 60466 Phone, 708-534-5200	2417 Bond Street	Chicago I aborata	Consmitted To Your Success			
	E-Mad	Fax	Phone		Address	Company	Contact	Report To:
		Fax	Phone		Address	Company	Contact	Bill To:
	Onote						, , , ,	
	4.4	Temperature °C of Cooler	No Yes No	Received on Ice Same	Yes No	Package Sealed Samples Sea	- Lab Lot # 94116 926	Shaded Areas For Internal Use Only

WW = Wastewater  W = Water SE = Sediment W = Water SO = Solid S = Soil SI = Studge NIScellaneous L = Leachate OL = Oil WI = Wipe OL = Oil O =  Matrix Key Container Key I Plastic 1 Pastic 2 VOA Vial 2 VOA Vial 3 Stenie Plastic 3 HNO3 Co 4 Amber Glass 5 NaOHZn 6 Other 7 None 7 None	RELINGUISHED BY COMPANY DATE					11. 1 miles 12 miles 1. 11 1. 11. 11.	Sample ID  Sampling  Sample ID  Date Time	10.01.01	Project Location Date Required	MAN MARKET OF THE	Name Project Number	The Tital	Signature		University Park, IL 60466	Chicago Laboratory 2417 Bond Street Phone	Committed To Your Success	Company	Comaco
ervative Key to 4* cool to 4* col to 4* col to 4* Acetate, Cool to 4*	TIME					į.	Comp As.2= (Cost)	7.6	16	serv 🍮	nume   t	ont		-	-	-	.  -		
COMMENTS	RECEIVED BY MY													PO# Oriote	Fax	Phone	Address	Company	Contact
	COMPANY COMPANY						,		San	()	至		With		Ten	~ R		Pac	La
Date Received 11 , 2 , 00  Courser FX Hand Delivered  Bill of Lading See Hack	OSPO TIME						Additional Analyses / Remarks	Yes No COC not present	Sample Labels and COC Agree	A	pH Check ok Res. Cl2 Check ok	Yes No NA	4		nperature °C of Cooler	Received on Ice Samples III.ac.		Package Sealed Samples Sealed	Lab Lot # 7件(10 10を)

STL Chicago Chain of Custody CHI 22 09 23174-544

#### Severn Trent Laboratories Chicago GC/MS Case Narrative

AFC001 – 16BBD STL# 9A11G926 VOA DATA:

- 1. All of the samples were analyzed within the 14-day hold time from the date of collection.
- 2. All Method Blank target compounds were below reporting limits.
- 3. The QC limits specified in the QAPP were used to evaluate QC acceptance. The compound Vinyl acetate was not specified in the QAPP as a QC control compound. At the client's request, Vinyl acetate was given QC limits of 0-0% and the flags on this compound have no QC significance. The spike recoveries were below the QC limits for Methylene chloride and above the QC limits for 1-Chlorohexene in the LCS (Laboratory Control Sample) sample 80GVT202-MB1 BS. The spike recoveries were below the QC limits for Methyl-tert-butyl ether and above the QC limits for 1,1-Dichloropropene, 1-Chlorohexene and 1,3,5-Trimethylbenzene in the LCS sample 80GVF372-MB1 BS. Further corrective action was not performed. These compounds were not detected in the associated samples. All of the other spike recoveries were within the QC limits in the LCS samples
- 4. Matrix Spike/Matrix Spike Duplicate analyses was not performed in this sample set.
- 5. All of the volatile samples had surrogate recoveries within the QAPP specified QC limits.
- 6. The water samples were prepared using Method 5030B. All samples were analyzed following SW846 Method 8260B and 8000B. All calibration criteria are met per method or QAPP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The target compounds were quantitated using the initial calibration
- 7 All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding continuing calibration standard.
- 8. The water samples were analyzed using a 25-mL purge volume. Initial analysis dilutions were performed on the sample 9A11G926-002 (1/25), 003 (1/25) and 004 (1/25). All of the other samples were initially analyzed without dilution. Secondary dilutions for target compounds were performed on the samples 9A11G926-002 (1/250), 003 (1/50), 004 (1/50) and 005 (1/50).

Gregory L/Goodwin

GC/MŠ Section Manager

11 (30/00

Date

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB110100

➡ Name: STS CHICAGO

Contract:

ین Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-001

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW01

Level. (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column. (pack/cap) CAP

Dilution Factor: 1 0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q 75-71-8-----Dichlorodifluoromethane\_\_\_\_ 0.5 74-87-3-----Chloromethane 0.5 75-01-4-----Vinyl chloride\_\_\_\_ 0.5 U 74-83-9-----Bromomethane 0.5 U 75-00-3-----Chloroethane 0 5 75-69-4-----Trichlorofluoromethane 0.5 U 75-35-4-----1,1-Dichloroethene\_\_ 75-09-2-----Methylene chloride 0.5U 1634-04-4-----Methyl-tert-Butyl Ether\_ 0.5 U 156-60-5-----trans-1,2-Dichloroethene 0.5 U 75-34-3-----1.1-Dichloroethane\_\_\_\_ U 108-05-4------Vinyl Acetate 0.5 156-59-2-----cis-1.2-Dichloroethene 0.5 594-20-7-----2,2-Dichloropropane U 74-97-5-----Bromochloromethane\_ 0.4 U 67-66-3-----Chloroform U 0.5 71-55-6-----1.1.1-Trichloroethane U 563-58-6-----1.1-Dichloropropene U 56-23-5-----Carbon tetrachloride 0.5 U 71-43-2-----Benzene 0.4 U 0.5 107-06-2----1,2-Dichloroethane U 79-01-6----Trichloroethene U 78-87-5-----1.2-Dichloropropane\_ 0.4 U 74-95-3-----Dibromomethane 0.5 U 0.55.55.5 75-27-4-----Bromodichloromethane U 10061-01-5----cis-1.3-Dichloropropene U 108-88-3-----Toluene 10061-02-6----trans-1,3-Dichloropropene U U 79-00-5-----1,1,2-Trichloroethane\_\_\_ 0.5 U 142-28-9-----1,3-Dichloropropane\_\_\_ 0.4 U 127-18-4----Tetrachloroethene 0.5 0.5 U 124-48-1-----Dibromochloromethane U 106-93-4-----1.2-Dibromoethane\_\_\_\_ 0.5 U 544-10-5----1-Chlorohexane\_\_\_\_ 0.5

#### 635 362 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB110100

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-001

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW01

Level· (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

. <u></u>	(ag, 2 o. ag,	g,g, _	~
630-20-6 100-41-4 136777-612 95-47-6 100-42-5 75-25-2 98-82-8 108-86-1 103-65-1 95-49-8 108-67-8 106-43-4 95-63-6 135-98-8 135-98-8 135-98-8 106-46-7 104-51-8 95-50-1 96-12-8 120-82-1 87-68-3 91-20-3	Styrene	0.55.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.	

### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

TB110100

EPA SAMPLE NO.

Name: STS CHICAGO

Contract:

Lau Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW01

Lab Sample ID: 9A11G926-001

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/11/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor, 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME		EST. CONC.	Q
2				
3.				
7				
9. 10.				
11. 12. 13.				
14. 15.				
16. 17. 18.				
19. 20. 21.				
22				
24				
27				
		-		

MW-10WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

LOW

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9Al1G926-002

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW02

Level (low/med)

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column: (pack/cap) CAP

Dilution Factor: 25.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

75-71-8			(3.5) = 3 - 5		_
544-10-51-Chlorohexane 12 U	74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-59-2 156-59-2 74-97-5 563-58-6 71-55-6 71-43-2 107-06-2 79-01-6 78-87-5 74-95-3 74-95-3 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 108-88-3 10061-01-5 108-88-3 1124-48-1 124-48-1 106-93-4	-Chloromethane -Vinyl chloride -Bromomethane -Chloroethane -Trichlorofluorome -1.1-Dichloroether -Methylene chloride -Methylene chloride -Methylene chloride -Methylene chloride -Methylene chloroethar -Vinyl Acetate -Cis-1.2-Dichloroethar -Vinyl Acetate -Cis-1.2-Dichloroprope -Bromochloromethar -Chloroform -1.1.1-Trichloroethar -Chloroform -1.1.1-Trichloroethar -Carbon tetrachlor -Benzene -1.2-Dichloroprope -Dibromomethane -1.2-Dichloromethane -Trichloroethene -1.2-Dichloromethane -Trichloroethene -1.2-Trichloroe -1.3-Dichloroprop -Tetrachloroethen -Dibromochloromethan -Dibromochloromethan	ethane ne le le le le le le le le le le le le le	12 12 12 12 12 12 10 12 10 50 12 12 11 10 12 12 11 10 12 12 12 12 12 12 12 12 12 12 12 12 12	טטטט מטטטטטשמטמטמטמטט טטטטטטט

#### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

Name: STS CHICAGO

Contract:

MW-10WG13

Lap Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW02

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed 11/11/00

Dilution Factor: 25.0

Column. (pack/cap) CAP

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

### 1E

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: STS CHICAGO

Contract:

MW-10WG13

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW02

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed 11/11/00

GC Column · CAP

ID: 0.53 (mm)

Dilution Factor: 25.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1 2 3 4. 5 6.	UNKNOWN ALKANE SUBST. BENZENE SUBST BENZENE SUBST. BENZENE SUBST. BENZENE	9.72 21.04 21 63 22 85 23.31	240 1700 650 700 1200	J J J
8. 9 10 11 12. 13. 14 15			,	
16 17. 18. 19 20 21 22. 23.				
24. 25. 26. 27. 28.				
30				

MW-10WG13DL

Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW06

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column: (pack/cap) CAP

Dilution Factor: 250.0

CONCENTRATION UNITS.

CAS NO.

COMPOUND

(ua/L or ua/Ka) ua/L

n

CAS NO.	COMPOUND	(ug/L or	ug/kg) ug/L		Ų
74-87-3 75-01-4 74-83-9 75-09-4 75-35-4 75-34-3 156-60-5 156-59-2 156-59-2 156-59-2 156-59-2 17-55-6 563-58-6 563-58-6 71-43-2 107-06-2 79-01-6 78-87-5 74-95-3 10061-01-5- 108-88-3 10061-02-6- 79-00-5 142-28-9 124-48-1 106-93-4	DichlorodifluoChloromethaneVinyl chlorideBromomethaneChloroethaneTrichlorofluor1.1-DichloroetMethylene chloroethanetrans-1,2-DichloroetVinyl AcetateVinyl Acetate2.2-DichloroprChloroform1,1-TrichlorCarbon tetrachCarbon tetrachBenzene1,2-DichloroprCarbon tetrachBromodichloroetherI,2-DichloroprCis-1,3-DichloroprTolueneTolueneTolueneTolueneTolueneTolueneTolueneToluene	romethane chene cride cityl Ether chane croethene chane chane chane cropane chane chane copene chane		120 120 120 120 120 120 120 120 120 120	

1A - VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1

MW-10WG13DL

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-002

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW06

Level (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 250.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

		ı
108-90-7Chlorobenzene 630-20-61.1.1.2-Tetrachloroethane	100 120	U
100-41-4Ethylbenzene	3300	Ď
136777-612p,m-Xylene	5300	D
95-47-6o-Xylene	1500	D
100-42-5Styrene 75-25-2Bromoform	100   120	111
98-82-8Isopropylbenzene	120	ŭ
79-34-51.1.2.2-Tetrachloroethane	120	Ŭ
108-86-1Bromobenzene	75	U)
96-18-41.2.3-Trichloropropane 103-65-1n-Propylbenzene	120	U
95-49-82-Chlorotoluene	100 100	ii)
108-67-81.3.5-Trimethylbenzene	120	ŭ
106-43-44-Chlorotoluene	120	U
98-06-6tert-Butylbenzene	120	Ŭ
95-63-61.2.4-Trimethylbenzene 135-98-8sec-Butylbenzene	2100 120	D
541-73-11,3-Dichlorobenzene	120	ŭ
99-87-6p-Isopropyltoluene	120	Ŭ
106-46-71,4-Dichlorobenzene	75	U
104-51-8n-Butylbenzene	120	υj
95-50-11.2-Dichlorobenzene 96-12-81.2-Dibromo-3-Chloropropane	75 120	U
120-82-11,2,4-Trichlorobenzene	100	ŭ
87-68-3Hexachlorobutadiene	120	Ŭ
91-20-3Naphthalene	820	D
87-61-61,2,3-TrichTorobenzene	120	U
	11	l

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 369 .

Lab Name: STS CHICAGO Contract:

SAV-2WG13

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-003

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW03

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed 11/11/00

GC Column CAP ID: 0 53 (mm)

Dilution Factor, 25.0

Soil Extract Volume. (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found, 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 7	SUBST. BENZENE SUBST. BENZENE UNKNOWN SUBST. INDENE UNKNOWN	23 31 24.25 24.49 25.57 25.85	840 450 320 220 350	J J
10. 11. 12. 13. 14 15. 16. 17.				
18. 19 20. 21 22. 23. 24.				
25 26. 27. 28. 29.				

SAV-2WG13DL

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-003

Sample wt/vol 25.00 (g/mL) ML

Lab File ID: JSW07

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 50.0

CONCENTRATION UNITS. CAC NO COMPOUND

CAS NO.	COMPOUND	(ug/L or	· ug/Kg) ug/L		Q
74-87-3 75-01-4 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 594-20-7 71-55-6 71-55-6 71-43-2 107-06-2 79-01-6 79-01-6 79-01-6 79-01-6 10061-01-5 10061-01-5 10061-02-6 79-00-5 124-28-9 124-48-1 106-93-4	1,2-Dichloroe Trichloroethe 1,2-Dichlorop Dibromomethan Bromodichloro cis-1,3-Dichl	romethane		25 25 25 25 25 25 25 25 25 25 25 25 25 2	

SAV-2WG13DL

▲ Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix. (soil/water) WATER

Lab Sample ID: 9A11G926-003

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW07

LOW

Level: (low/med)

Date Received: 11/02/00

% Moisture: not dec

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 50.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

108-90-7	20 25 860 25 25 25 25 25 25 25 25 25 25 25 25 25	
95-63-61,2,4-Trimethylbenzene 135-98-8sec-Butylbenzene 541-73-11,3-Dichlorobenzene 99-87-6p-Isopropyltoluene	25 25 25 25	

DUP05WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW04

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec. \_\_\_\_

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor. 25.0

CONCENTRATION UNITS.

(ug/L or ug/Kg) ug/L Q CAS NO. COMPOUND

CAS NO.	CONTOOND (ug/E of ug/	Kg, ug, E	
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-59-2 156-59-2 594-20-7 74-97-5 74-97-5 107-06-2 79-01-6 78-87-5 74-95-3 74-95-3 74-95-3 108-88-3 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 124-48-1 124-48-1 124-48-1 106-93-4	DichlorodifluoromethaneChloromethaneVinyl chlorideBromomethaneChloroethaneChloroethaneTrichlorofluoromethaneI.1-DichloroetheneMethyl-tert-Butyl Ethertrans-1.2-DichloroetheneI.1-DichloroethaneVinyl AcetateCis-1.2-Dichloroethene2.2-DichloromethaneChloroform1.1-TrichloroethaneChloroform1.1-DichloropropeneCarbon tetrachlorideBenzene1.2-DichloroethaneTrichloroethene1.2-DichloropropaneI.2-DichloropropaneI.2-DichloropropaneI.2-Dichloropropane	12 12 12 12 12 12 12 12 12 10 50 12 12 10 8 12 12 12 12 12 12 12 12 12 12 12 12 12	

Lab Name: STS CHICAGO

Contract:

DUP05WG13

Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

LOW

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW04

Level: (low/med)

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/11/00

Column (pack/cap) CAP

Dilution Factor: 25 0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7	10 12 1100 780 12 10 12 330 12 8 12 940 10 110 12 12 610 12 12 610 12 12 12 610 12 12 12 610 12 12 12	טטע טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט

## VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

_	_	_	

ab Name: STS CHICAGO

Contract:

DUP05WG13

ab Code:

Case No.: SAS No..

SDG No.: U11926

atrix. (soil/water) WATER

Lab Sample ID. 9A11G926-004

ample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW04

evel: (low/med) LOW

Date Received: 11/02/00

Moisture: not dec

Date Analyzed: 11/11/00

C Column, CAP

ID. 0.53 (mm)

Dilution Factor: 25 0

oil Extract Volume: (uL)

Soil Aliquot Volume (uL)

CONCENTRATION UNITS. (ug/L or ug/Kg) ug/L

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3 4 5. 6.	SUBST. BENZENE SUBST. BENZENE SUBST BENZENE SUBST. INDENE UNKNOWN	23.31 24.24 24.48 25.56 25.86	910 470 350 230 370	J J
7. 8 9 10. 11 12.				
13 14 15 16 17. 18.				
19. 20. 21. 22. 23 24				
24 25 26 27 28. 29.				

DUP05WG13DL

Lat Name: STS CHICAGO

Contract.

Law Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW08

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column: (pack/cap) CAP

Dilution Factor: 50 0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ua/L or ua/Ka) ua/L

0

CAS NO.	CONFOUND (ug/E of ug	/Ng/ ug/L	<b>u</b>
74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 594-20-7 74-97-5 67-66-3 71-55-6 563-58-6 56-23-5 71-43-2 107-06-2 79-01-6 78-87-5 74-95-3 74-95-3 108-88-3 108-88-3 10061-01-5- 108-88-3 106-93-4	DichlorodifluoromethaneChloromethaneVinyl chlorideBromomethaneChloroethaneChloroethaneTrichlorofluoromethaneNethylene chlorideMethylene chlorideMethylene chloride	25 25 25 25 25 25 25 25 25 25 20 100 25 25 25 25 25 25 25 25 25 25 25 25 25	U U

DUP05WG13DL

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-004

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW08

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 50.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0	
	Q

108-90-7	20 25 800 25 25 20 25 25 25 25 25 25 25 25 25 25 25 25 25	

BGSMW03WG13

Wame:

STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix. (soil/water) WATER

Lab Sample ID: 9A11G926-005

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW11

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS.

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

CAS NO.	CONFOUND	(ug/ L O	ug/Ng/ ug/L		ď
74-87-3 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 594-20-7 74-97-5 67-66-3 71-55-6 563-58-6 71-43-2 107-06-2 79-01-6 78-87-5 108-88-3 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 124-48-1 106-93-4	1.2-DichToroeth Trichloroethene 1.2-Dichloropro Dibromomethane Bromodichlorome	methaneene	e	5555555555554255435555055455555555555555	

BGSMW03WG13

Lab Name: STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-005

Lab Code:

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW11

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture not dec. \_\_\_

Date Analyzed. 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND	(ug/L of	ug/kg/ ug/L		ч
630-20-6 100-41-4 136777-612 95-47-6 100-42-5 75-25-2 98-82-8 108-86-1 108-86-1 96-18-4 106-43-4 95-63-6 135-98-8 135-98-8 135-98-8 135-98-8 106-46-7 104-51-8 104-51-8 120-82-1 87-68-3	Chlorobenzene1,1,1,2-TetrachTEthylbenzenep,m-Xyleneo-XyleneStyreneBromoformIsopropylbenzene1,2,3-Trichloropn-Propylbenzene1,3,5-Trimethylb4-Chlorotoluene1,2,4-Trimethylbsec-Butylbenzene1,3-Dichlorobenz1,4-Dichlorobenz1,4-Dichlorobenz1,2-Dichlorobenz1,2-Dichlorobenz1,2-Dichlorobenz1,2-Dichlorobenz1,2-Trichlorobenz1,2-Trichlorobenz1,2-Trichlorobenz1,2-Trichlorobenz	enzene enzene enzene enzene ene ene ene		0.45 0.53 0.53 0.53 0.53 0.71 0.53 0.53 0.53 0.53 0.53 0.53 0.53 0.53	

## VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BGSMW03WG13

635 379

Lab\_Name:

STS CHICAGO

Contract:

Lau-code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-005

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW11

Level: (low/med)

LOW

Date Received: 11/02/00

% Moisture. not dec.

Date Analyzed: 11/12/00

GC Column: CAP

ID. 0 53 (mm)

Dilution Factor: 1.0

Soil Extract Volume. (uL)

Soil Aliquot Volume: (uL)

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4.	UNKNOWN UNKNOWN ALKENE SUBST. BENZENE SUBST. BENZENE SUBST. BENZENE	3.22 6.77 18 03 19.07 20 46	8 16 400 120 140	J J J J
8 9. 10. 11 12. 13. 14.				
16. 17. 18. 19. 20.				
22. 23. 24. 25. 26.				
28.				

BGSMW03WG13DL

Lab Name: STS CHICAGO

Contract.

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-005

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW09

Level: (low/med)

LOW

Date Received 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 50.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

			<u> </u>
75-71-8	Dichlorodifluoromethane_	25	U
l 74-87 <b>-</b> 3	Chloromethane	25	Ū1
75-01-4	Vinyl chloride	25	ūΙ
74-83-9 <b>-</b>	Bromomethane	25	U
75-00-3	Chloroethane	25	ŪΙ
75-69-4 <b>-</b>	Trichlorofluoromethane	25	Ūĺ
75-35-4	1.1-Dichloroethene	25	υl
75-09-2	Methylene chloride	25	Ū
1634-04-4	Methyl-tert-Butyl Ether	25	ŪΙ
156-60-5	trans-1,2-Dichloroethene	25	Ū
75-34-3	1.1-Dichloroethane	20	ŪΙ
108-05-4	Vinyl Acetate	100	ŭŀ
156-59-2	cis-1.2-Dichloroethene	25	ŭl
594-20-7	2.2-Dichloropropane	25	ŭl
74-97-5	Bromochloromethane	20	ŭl
67-66-3	Chloroform	15	ŭl
71-55-6	1.1.1-TrichToroethane	25	ŭ
563-58-6	1.1-Dichloropropene	-   25	ŪÌ
56-23-5	Carbon tetrachloride	25	ūl
71-43-2	Benzene	2000	ام
107-06-2	1,2-Dichloroethane	25	ūi
79-01-6	Trichloroethene	25	ŭ
78-87-5	1.2-Dichloropropane	20	Ū
74-95-3	Dibromomethane	- 25	ŭ
75-27-4	Bromodichloromethane	- 25	Ŭ
10061-01-5	cis-1,3-Dichloropropene	25	ŭl
108-88-3	Toluene	25	Ŭ
	trans-1,3-Dichloropropene	- 25	Ŭ
79-00-5	1,1,2-Trichloroethane	25	Ü
142-28-9	·1,3-Dichloropropane	- 20	Ŭ
127-18-4	Tetrachloroethene	- 25	Ŭ
124-48-1	Dibromochloromethane	- 25	Ŭ
106-93-4	1,2-Dibromoethane	- 25	ij
1 544-10-5	1-Chlorohexane	- 25	IJ
1 3 1 1 2 3	1 onto one varie	-  23	U
J		_1	

BGSMW03WG13DL

b Code:

: STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U11926

trix: (soil/water) WATER

Lab Sample ID: 9A11G926-005

mple wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW09

LOW

vel: (low/med)

Date Received: 11/02/00

Moisture: not dec.

Date Analyzed: 11/12/00

lumn (pack/cap) CAP

Dilution Factor. 50.0

CONCENTRATION UNITS.

CAS NO

COMPOUND

(ug/L or ug/Kg) ug/L

Q

108-90-7	20 25 25 25 25 25 25 25 25 25 25 25 25 25	מטפטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
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#### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BGSMW06WG13

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-006

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: JSW12

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture not dec.

Date Analyzed: 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO

COMPOLIND

(ug/L or ug/Kg) ug/L

n

BGSMW06WG13

Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-006

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW12

Level. (low/med)

LOW

Date Received: 11/02/00

% Moisture: not dec.

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

# VOLATILE ORGANICS ANALYSIS DATA SHEET

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: STS CHICAGO

Contract:

BGSMW06WG13

EPA SAMPLE NO.

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-006

Sample wt/vol:

25.00 (g/mL) ML

JSW12 Lab File ID:

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture not dec.

Date Analyzed: 11/12/00

GC Column. CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST CONC.	Q
1. 2. 3. 110-54-3 4 5. 6 7.	UNKNOWN UNKNOWN HEXANE UNKNOWN UNKNOWN	3.23 5.45 5.87 20.46 23.55	1 2 26 2 4	J NJ J
8				
16. 17. 18. 19.				
21. 22 23. 24. 25. 26. 27				
28. 29. 30.				

635 385

⊾Name: STS CHICAGO

Contract:

EB110100

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol: 25.00 (g/mL) ML

JSW05 Lab File ID:

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec. dec.

Date Extracted: 11/12/00

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/12/00

GPC Cleanup. (Y/N) N pH: 7.0

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L 0

	com comb (ag	/L or agring / a	j. –	~
74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 75-35-4 156-60-5 156-60-5 156-59-2 156-59-2 594-20-7 74-97-5 563-58-6 71-55-6 71-43-2 107-06-2 78-87-5 74-95-3 75-27-4	1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Dibromomethane Bromodichloromethan cis-1,3-Dichloropro	e e	5.5.5.5.5.5.5.4.2.5.5.4.5.5.4.5.5.5.5.5.	

EB110100

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

CAS NO.

Lab Sample ID: 9A11G926-007

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW05

Level: (low/med) LOW Date Received: 11/02/00

% Moisture: not dec.\_\_\_\_ dec.\_\_\_

Date Extracted: 11/12/00

Extraction. (SepF/Cont/Sonc) CONT

COMPOUND

Date Analyzed: 11/12/00

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L

79-00-5 142-28-9 127-18-4 124-48-1 106-93-4 544-10-5 108-90-7 630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 79-34-5 108-86-1 96-18-4 103-65-1 95-49-8 106-43-4 98-06-6 95-63-6 135-98-8 135-98-8	trans-1,3-Dichloropropene1,1,2-Trichloroethane1,3-DichloropropaneTetrachloroetheneDibromochloromethane1,2-Dibromoethane1,2-Dibromoethane1,1,1,2-TetrachloroethaneEthylbenzenep,m-XyleneDibromoethaneDibromoethaneDibromoethane	5.5.4.5.5.5.5.4.5.5.5.5.5.5.5.5.5.5.5.5	

# VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

635 387

EB110100

Lab Code:

LawName: STS CHICAGO

Contract:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW05

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: not dec. dec.

Date Extracted: 11/12/00

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 11/12/00

GPC Cleanup. (Y/N) N pH: 7.0

Dilution Factor. 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

106-46-71,4-Dichlorobenzene 104-51-8n-Butylbenzene 95-50-11,2-Dichlorobenzene 96-12-81,2-Dibromo-3-Chloropropane 120-82-11,2,4-Trichlorobenzene 87-68-3Hexachlorobutadiene 91-20-3Naphthalene 87-61-61,2,3-Trichlorobenzene	0.3 0.5 0.3 0.5 0.4 0.5 0.5	0000
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### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lai	h	N	a	m	е	٠
_ 0	9	1	u	11	C	٠

Lab Name: STS CHICAGO

Contract:

Lab Code: Case No.: SAS No.: SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 9A11G926-007

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: JSW05

Level: (low/med) LOW

Date Received: 11/02/00

% Moisture: \_\_\_\_\_ decanted: (Y/N)\_\_\_

Date Extracted:11/12/00

Concentrated Extract Volume:\_\_\_\_(uL)

Date Analyzed 11/12/00

Dilution Factor: 1.0

Injection Volume: (uL)

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2 110-54-3 3. 4. 5.	UNKNOWN ALKANE HEXANE	5.45	6 120	J NJ 
3. 9. 0. 1. 2.				
4. 5. 6. 7. 8. 9. 20.				
21. 22. 23. 24. 25.				
26. 27. 28. 29. 30.	FORM I SV-TIC			- - - - - - - - - - - - - - - - - - -

635 389

Name: STS CHICAGO

Contract:

**VBLKKJ** 

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVT202-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: SA1112

Level: (low/med) LOW

Date Received: 11/12/00

% Moisture: not dec

Date Analyzed. 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCEN	TRA	ΓION	UNITS:	
/ /1	_	- 11/-	N	

CAS NO. COMPOUND	(ug/L or ug/Kg) ug/L	Q
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75-71-8	5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.	

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKJ

Lab Name

STS CHICAGO

Contract:

1\_\_\_\_

Lab Code:

Case No.:

LOW

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVT202-MB1

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: SA1112

Level: (low/med)

Date Received: 11/12/00

% Moisture: not dec

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS.

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

0

,	· - 5/ =	7
108-90-7	0.55.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.	

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

635 391

Name:	STS	CHICAGO
. vanc.	5.5	0.1101100

Contract:

VBLKKJ

Lab Code:

Case No.: SAS No.:

LOW

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVT202-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: SA1112

Level (low/med)

Date Received: 11/12/00

% Moisture. not dec. \_\_\_\_\_

Date Analyzed: 11/12/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: \_\_\_\_(uL)

Number TICs found 0

Soil Extract Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
1	_			
3.				
Ž				
8				
10.				
12. 13. 14.				
14. 15. 16				
17				
19. 20. 21.				
22		-		
24				
26. 27. 28.		-		-
29		_		-
				-\- <u></u>

#### 635 392 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKKN

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: Ul1926

Matrix (soil/water) WATER

Lab Sample ID: 80GVF372-MB1

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: PE110

Level: (low/med) LOW

Date Received. 11/10/00

% Moisture: not dec.

Date Analyzed. 11/10/00

Column: (pack/cap) CAP

Dilution Factor. 1.0

CONCENTRATION UNITS:

CAS NO COMPOLIND

 $(\mu\alpha/L)$  or  $\mu\alpha/K\alpha$ )  $\mu\alpha/L$ 

# VOLATILE ORGANICS ANALYSIS DATA SHEET .

EPA SAMPLE NO.

635 393

VBLKKN

me: STS CHICAGO L

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVF372-MB1

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: PE110

Level: (low/med) LOW

Date Received: 11/10/00

% Moisture. not dec. \_\_

Date Analyzed: 11/10/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

		J. J.	•
630-20-6 100-41-4 136777-612 95-47-6 75-25-2 98-82-8 108-86-1 96-18-4 108-67-8 106-43-4 98-06-6 95-63-6 135-98-8 135-98-8 106-46-7 104-51-8 96-12-8	BromoformIsopropylbenzene1.1,2,2-TetrachloroethaneBromobenzene1.2,3-Trichloropropane1,3,5-Trimethylbenzene4-Chlorotoluenetert-Butylbenzene1,2,4-Trimethylbenzenesec-Butylbenzene1,3-Dichlorobenzene1,4-Dichlorobenzene	4.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
99-87-6 106-46-7 104-51-8 95-50-1 96-12-8 120-82-1 87-68-3 91-20-3	p-Isopropyltoluenep.Isopropyltoluene1,4-Dichlorobenzene1.2-Dichlorobenzene1,2-Dibromo-3-Chloropropane1.2.4-TrichlorobenzeneHexachlorobutadiene	0.3 0.3 0.5 0.5 0.4 0.5 0.5	טטטטטטט
87-61-6	1.2.3-TrichTorobenzene	0.5	U

# VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**VBLKKN** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: PE110

Level. (low/med) LOW

Matrix: (soil/water) WATER

Date Received: 11/10/00

Lab Sample ID: 80GVF372-MB1

% Moisture not dec.

Date Analyzed: 11/10/00

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_(uL)

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
3 4				
5.				
8 9.				
10.				
12.				
14 15.				
16. 17. 18.				
19				
21				
23				
22 23. 24. 25. 26 27. 28. 29.				
28.				
30.				

**VBLKKJBS** 

635 395

Name: STS CHICAGO Contract.

Lab Code: Case No.:

SAS No.:

SDG No : U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVT202-MB1S

Sample wt/vol-

25.00 (g/mL) ML

Lab File ID: SC1112

Level: (low/med)

LOW

Date Received. 11/12/00

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 11/12/00

Column. (pack/cap) CAP

Dilution Factor, 1.0

CONCENTRATION UNITS:

CAS NO

COMPOUND

CAS NU.	COMPOUND	(ug/L or	ug/Kg)	ug/L	Q
74-87-3 75-01-4 75-00-3 75-69-4 75-35-4 156-60-5 156-59-2 156-59-2 156-59-2 156-59-2 156-59-2 17-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 71-55-6 107-06-2 79-01-6 78-87-5 74-95-3 10061-01-5- 108-88-3 10061-02-6- 79-00-5 142-28-9 124-48-1 106-93-4	Dichlorodifluction	romethane	e	8 10 10 11 11 10 7 9 10 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10	

1

**VBLKKJBS** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix (soil/water) WATER

Lab Sample ID: 80GVT202-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: SC1112

Level: (low/med) LOW

Date Received: 11/12/00

% Moisture: not dec.

Date Analyzed. 11/12/00

Column (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

108-90-7	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9

**VBLKKNBS** 

Name: STS CHICAGO

Contract:

Lab Code:

Case No.: SAS No.:

SDG No.: U11926

Matrix. (soil/water) WATER

Lab Sample ID: 80GVF372-MB1S

Sample wt/vol: 25.00 (g/mL) ML

Lab File ID: PF1110

Level: (low/med) LOW

Date Received: 11/10/00

% Moisture: not dec. \_\_\_\_

Date Analyzed. 11/10/00

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

Q

one no.	CONTROUND (ug/ E or ug/ Ng/ ug	,, _
74-87-3 75-01-4 75-01-4 75-00-3 75-69-4 75-35-4 75-34-3 156-60-5 156-59-2 156-59-2 156-59-2 156-59-2 156-59-2 171-55-6 71-55-6 71-55-6 71-43-2 107-06-2 79-01-6 78-87-5 108-88-3 10061-01-5 108-88-3 10061-02-6 79-00-5 142-28-9 127-18-4 124-48-1 106-93-4	1.2-Dichloroethane Trichloroethene 1.2-Dichloropropane Dibromomethane Bromodichloromethane cis-1.3-Dichloropropene	7 8 10 10 10 10 8 10 10 11 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10

### 635 398 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**VBLKKNBS** 

Lab Name: STS CHICAGO

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: U11926

Matrix: (soil/water) WATER

Lab Sample ID: 80GVF372-MB1S

Sample wt/vol:

25.00 (g/mL) ML

Lab File ID: PF1110

Level: (low/med) LOW

Date Received: 11/10/00

% Moisture: not dec.

Date Analyzed: 11/10/00

Column: (pack/cap) CAP

Dilution Factor: 1 0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

Q

108-90-7
87-61-61,2,3-TrichTorobenzene9

# FINAL PAGE

# ADMINISTRATIVE RECORD

# FINAL PAGE